

Golden Valley Ranch Technical Drainage Study

cokey		chkey		Soil Texture		Confining layer	XKSAT
1507989	652686	1507989	3840721	very gravelly sand	GRV-S		
1507992	652689	1507992	3840854	very gravelly loam	GRV-L	GRV-L	0.25
1507992	652689	1507992	3840855	very gravelly loam	GRV-L		
1507992	652689	1507992	3840856	very gravelly clay loam	GRV-CL		
1507992	652689	1507992	3840857	very gravelly loam	GRV-L		
1507992	652689	1507992	3840858	indurated	IND		
1507995	652692	1507995	1386501	extremely cobbly coarse sandy loam	CBX-COSL	CBX-COSL	0.4
1507995	652692	1507995	1386502	gravelly coarse sandy loam	GR-COSL		
1507995	652692	1507995	1386503	weathered bedrock	WB		
1507995	652692	1507995	1386504	unweathered bedrock	UWB		
1507995	652693	1507995	1386505	extremely gravelly sandy loam	GRX-SL	GRV-CL	0.04
1507995	652693	1507995	1386506	very gravelly clay loam	GRV-CL		
1507995	652693	1507995	1386507	gravelly clay	GR-C		
1507995	652693	1507995	1386508	weathered bedrock	WB		
1507995	652693	1507995	1386509	unweathered bedrock	UWB		
1507997	652697	1507997	3840912	very gravelly sandy loam	GRV-SL	GRV-SL	0.4
1507997	652697	1507997	3840913	gravelly coarse sandy loam	GR-COSL		
1507997	652697	1507997	3840914	weathered bedrock	WB		
1507997	652697	1507997	3840915	unweathered bedrock	UWB		
755744	1117678	755744	3806855	gravelly sandy loam	GR-SL	GR-SCL	0.04
755744	1117678	755744	3165749	gravelly sandy clay loam	GR-SCL		
755744	1117678	755744	3165723	gravelly sandy clay loam	GR-SCL		
755744	1117678	755744	3165722	very gravelly coarse sandy loam	GRV-COSL		
755744	1117678	755744	3165721	extremely gravelly sandy loam	GRX-SL		
755744	1117678	755744	3165720	very gravelly loamy coarse sand	GRV-LCOS		
755744	1117679	755744	3165448	gravelly sandy loam	GR-SL	SL	0.4
755744	1117679	755744	3807711	sandy loam	SL		
755744	1117679	755744	3165446	sandy loam	SL		
755744	1117679	755744	3165445	sandy loam	SL		
755744	1117679	755744	3165444	fine sandy loam	FSL		
755805	1117734	755805	3167827	gravelly sandy loam	GR-SL	GR-SCL	0.04
755805	1117734	755805	3167826	gravelly sandy clay loam	GR-SCL		
755805	1117734	755805	3167825	clay loam	CL		
755805	1117734	755805	3167824	clay loam	CL		
755805	1117734	755805	3560129	unweathered bedrock	UWB		
755805	1117735	755805	3167797	gravelly sandy loam	GR-SL	GRV-SCL	0.06
755805	1117735	755805	3167796	very gravelly sandy clay loam	GRV-SCL		
755805	1117735	755805	3167795	very cobbly sandy clay loam	CBV-SCL		
755805	1117735	755805	3560128	weathered bedrock	WB		
755852	1117781	755852	3187502	sandy loam	SL	L	0.25
755852	1117781	755852	3187503	loam	L		
755852	1117781	755852	3187504	loam	L		
755852	1117781	755852	3187478	loam	L		
755852	1117781	755852	3187505	loam	L		
755718	1118760	755718	3236858	gravelly sandy loam	GR-SL	GR-SL	0.4
755718	1118760	755718	3236857	very gravelly sandy loam	GRV-SL		
755718	1118760	755718	3236856	very gravelly sandy loam	GRV-SL		
755718	1118760	755718	3236859	very gravelly sandy loam	GRV-SL		
755718	1118760	755718	3236855	sandy loam	SL		
755718	1118760	755718	3560041	indurated	IND		
755718	1118761	755718	3359017	very cobbly sandy loam	CBV-SL	CBV-SL	0.15

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755718	1118761	755718	3359016	very cobbly sandy loam	CBV-SL		
755718	1118761	755718	3359015	very cobbly sandy loam	CBV-SL		
755718	1118761	755718	3560040	indurated	IND		
755852	1144685	755852	3362832	sandy loam	SL	SCL	0.06
755852	1144685	755852	3362834	sandy clay loam	SCL		
755852	1144685	755852	3362835	sandy loam	SL		
755852	1144685	755852	3362836	gravelly sandy clay loam	GR-SCL		
755852	1144685	755852	3362837	gravelly sandy clay loam	GR-SCL		
798413	1150262	798413	3533649	gravelly sandy loam	GR-SL	GR-SL	0.4
798413	1150262	798413	3533648	gravelly sandy loam	GR-SL		
798413	1150262	798413	3533666	very gravelly loamy coarse sand	GRV-LCOS		
798413	1150262	798413	3533667	gravelly sandy clay loam	GR-SCL		
798403	1150263	798403	3807699	silty clay loam	SICL	SICL	0.04
798403	1150263	798403	3879948	silty clay loam	SICL		
798403	1150263	798403	3492952	silty clay loam	SICL		
798403	1150263	798403	3492951	silt loam	SIL		
798403	1150263	798403	3492950	sandy clay loam	SCL		
798418	1152141	798418	3533890	extremely cobbly sandy loam	CBX-SL	CBX-SL	0.4
798418	1152141	798418	3533885	very gravelly sandy loam	GRV-SL		
798418	1152141	798418	3569011	unweathered bedrock	UWB		
798404	1152201	798404	3806546	extremely gravelly loam	GRX-L	GRX-L	0.25
798404	1152201	798404	3807690	very gravelly loam	GRV-L		
798404	1152201	798404	3560051	unweathered bedrock	UWB		
798419	1152208	798419	3445234	extremely gravelly sandy loam	GRX-SL	GRX-SL	0.4
798419	1152208	798419	3445233	very gravelly sandy loam	GRV-SL		
798419	1152208	798419	3569012	unweathered bedrock	UWB		
798444	1152210	798444	3537026	very gravelly sandy clay loam	GRV-SCL	GRX-SCL	0.06
798444	1152210	798444	3537027	extremely gravelly sandy clay loam	GRX-SCL		
798444	1152210	798444	3537028	extremely gravelly coarse sandy loam	GRX-COSL		
798444	1152210	798444	3537029	very gravelly sandy clay loam	GRV-SCL		
798444	1152211	798444	3534166	very gravelly sandy loam	GRV-SL	GRV-SL	0.4
798444	1152211	798444	3534268	very gravelly sandy loam	GRV-SL		
798444	1152211	798444	3534201	extremely gravelly sandy loam	GRX-SL		
798444	1152211	798444	3534164	very gravelly sandy loam	GRV-SL		
798444	1152211	798444	3534200	extremely gravelly sandy loam	GRX-SL		
798430	1152215	798430	3544918	very gravelly sandy loam	GRV-SL	GRV-SL	0.4
798430	1152215	798430	3544919	very gravelly sandy loam	GRV-SL		
798430	1152215	798430	3544920	extremely gravelly sandy loam	GRX-SL		
798430	1152215	798430	3560001	indurated	IND		
798430	1152216	798430	3537699	extremely gravelly sandy loam	GRX-SL	GRX-SL	0.4
798430	1152216	798430	3537698	extremely gravelly sandy loam	GRX-SL		
798430	1152216	798430	3560000	indurated	IND		
798442	1152314	798442	3640005	very gravelly sandy clay loam	GRV-SCL	GRV-SCL	0.06
798442	1152314	798442	3640006	extremely gravelly sandy clay loam	GRX-SCL		
798442	1152314	798442	3640007	extremely gravelly coarse sandy loam	GRX-COSL		
798442	1152314	798442	3640008	very gravelly sandy clay loam	GRV-SCL		
798442	1152315	798442	3545336	sandy loam	SL	CL	0.04
798442	1152315	798442	3545423	clay loam	CL		
798442	1152315	798442	3545338	clay	C		
798442	1152315	798442	3545355	very gravelly clay loam	GRV-CL		
798442	1152315	798442	3545356	very gravelly sandy loam	GRV-SL		

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798442	1152315	798442	3560002	indurated	IND		
798356	1152317	798356	3534495	extremely gravelly sandy loam	GRX-SL	GRX-SL	0.4
798356	1152317	798356	3534496	very gravelly sandy loam	GRV-SL		
798356	1152317	798356	3534494	extremely gravelly sandy loam	GRX-SL		
798356	1152318	798356	3545537	gravelly sandy loam	GR-SL	GR-SL	0.4
798356	1152318	798356	3545538	extremely gravelly sandy loam	GRX-SL		
798356	1152318	798356	3545566	very gravelly sandy loam	GRV-SL		
798356	1152319	798356	3545513	gravelly loamy sand	GR-LS	GR-LS	1.2
798356	1152319	798356	3545514	extremely gravelly coarse sand	GRX-COS		
798356	1152319	798356	3545515	extremely gravelly loamy coarse sand	GRX-LCOS		
755184	1152645	755184	3361350	very cobbly sandy loam	CBV-SL	CBV-CL	0.04
755184	1152645	755184	3361349	very cobbly clay loam	CBV-CL		
755184	1152645	755184	3361348	very gravelly sandy clay loam	GRV-SCL		
755184	1152645	755184	3361347	very gravelly sandy clay loam	GRV-SCL		
755184	1152645	755184	3361346	very gravelly coarse sandy loam	GRV-COSL		
755184	1152645	755184	3361345	sandy clay loam	SCL		
798400	1156871	798400	3806814	extremely cobbly sandy loam	CBX-SL	CBX-SL	0.4
798400	1156871	798400	3806813	extremely cobbly sandy loam	CBX-SL		
798400	1156871	798400	3560081	unweathered bedrock	UWB		
798395	1156874	798395	3551233	very flaggy sandy loam	FLV-SL	FLV-SL	0.4
798395	1156874	798395	3551234	very flaggy sandy loam	FLV-SL		
798395	1156874	798395	3560082	unweathered bedrock	UWB		
798355	1156979	798355	3545519	gravelly loamy sand	GR-LS	GR-LS	1.2
798355	1156979	798355	3545520	extremely gravelly coarse sand	GRX-COS		
798355	1156979	798355	3545521	extremely gravelly loamy coarse sand	GRX-LCOS		
798394	1156980	798394	3453292	gravelly sandy loam	GR-SL	GR-SL	0.4
798394	1156980	798394	3453291	loamy coarse sand	LCOS		
798394	1156980	798394	3453290	extremely gravelly loamy coarse sand	GRX-LCOS		
798397	1156981	798397	3545523	gravelly loamy sand	GR-LS	GR-LS	1.2
798397	1156981	798397	3545522	gravelly loamy sand	GR-LS		
798397	1156981	798397	3545524	extremely gravelly sand	GRX-S		
798375	1156982	798375	3545530	extremely gravelly sand	GRX-S	GRX-S	4.6
798359	1156998	798359	3537130	very stony sandy loam	STV-SL	STV-SL	0.4
798359	1156998	798359	3537132	very gravelly sandy loam	GRV-SL		
798359	1156998	798359	3537133	extremely gravelly sandy clay loam	GRX-SCL		
798359	1156998	798359	3537134	extremely gravelly coarse sandy loam	GRX-COSL		
798371	1156999	798371	3438825	very gravelly sandy clay loam	GRV-SCL	GRV-SCL	0.06
798371	1156999	798371	3537292	extremely gravelly sandy clay loam	GRX-SCL		
798371	1156999	798371	3438823	extremely gravelly coarse sandy loam	GRX-COSL		
798371	1156999	798371	3537291	very gravelly sandy clay loam	GRV-SCL		
798360	1157000	798360	3537205	loam	L	GR-SCL	0.04
798360	1157000	798360	3537226	gravelly sandy clay loam	GR-SCL		
798360	1157000	798360	3537221	gravelly sandy clay loam	GR-SCL		
798360	1157000	798360	3537237	very gravelly sandy clay loam	GRV-SCL		
798364	1157005	798364	3551239	gravelly loamy sand	GR-LS	GR-LS	1.2
798364	1157005	798364	3551256	very gravelly loamy coarse sand	GRV-LCOS		
798364	1157005	798364	3551257	gravelly loamy sand	GR-LS		
798364	1157005	798364	3551238	extremely gravelly loamy sand	GRX-LS		
798365	1157006	798365	3661960	extremely gravelly loamy sand	GRX-LS	GRX-LS	1.2
798365	1157006	798365	3453206	extremely gravelly loamy sand	GRX-LS		
798365	1157006	798365	3453205	extremely gravelly sand	GRX-S		

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798424	1157008	798424	3551260	extremely gravelly sandy loam	GRX-SL	GRX-SL	0.4
798424	1157008	798424	3551259	extremely gravelly loamy sand	GRX-LS		
798424	1157008	798424	3551258	extremely gravelly loamy sand	GRX-LS		
798363	1157010	798363	3551262	extremely gravelly sandy loam	GRX-SL	GRX-SL	0.4
798363	1157010	798363	3551264	extremely gravelly loamy sand	GRX-LS		
798369	1157019	798369	3548083	very stony sandy loam	STV-SL	STV-SCL	0.06
798369	1157019	798369	3548188	very stony sandy clay loam	STV-SCL		
798369	1157019	798369	3548084	very stony clay	STV-C		
798369	1157019	798369	3560005	indurated	IND		
798382	1157020	798382	3490371	very gravelly sandy loam	GRV-SL	GRX-CL	0.04
798382	1157020	798382	3490370	extremely gravelly clay loam	GRX-CL		
798382	1157020	798382	3490369	extremely gravelly clay	GRX-C		
798382	1157020	798382	3490368	very stony clay	STV-C		
798382	1157020	798382	3560007	indurated	IND		
798359	1157021	798359	3545652	very stony sandy loam	STV-SL	STV-SL	0.4
798359	1157021	798359	3545658	gravelly sandy loam	GR-SL		
798359	1157021	798359	3545659	very gravelly sandy loam	GRV-SL		
798376	1157028	798376	3440314	very gravelly sandy loam	GRV-SL	GRV-SL	0.4
798376	1157028	798376	3440315	very gravelly sandy loam	GRV-SL		
798502	1157450	798502	3545828	very gravelly sandy loam	GRV-SL	GRV-SL	0.4
798502	1157450	798502	3545827	very gravelly sandy loam	GRV-SL		
798502	1157450	798502	3814936	gravelly sandy loam	GR-SL		
798502	1157450	798502	3545826	very gravelly sandy loam	GRV-SL		
798446	1157451	798446	3454581	gravelly sandy loam	GR-SL	L	0.25
798446	1157451	798446	3454580	loam	L		
798446	1157451	798446	3560004	indurated	IND		
798446	1157452	798446	3546135	gravelly sandy loam	GR-SL	L	0.25
798446	1157452	798446	3546138	loam	L		
798446	1157452	798446	3546137	loam	L		
798446	1157452	798446	3546145	loam	L		
798446	1157452	798446	3560003	indurated	IND		
798388	1157453	798388	3951426	gravelly sandy loam	GR-SL	SL	0.4
798388	1157453	798388	3547535	sandy loam	SL		
798388	1157453	798388	3951428	sandy clay loam	SCL		
798388	1157453	798388	3951427	sandy clay loam	SCL		
798388	1157453	798388	3951429	very gravelly sandy clay loam	GRV-SCL		
798388	1157453	798388	3951430	extremely gravelly loamy sand	GRX-LS		
798388	1157453	798388	3816614	extremely gravelly sand	GRX-S		
798391	1157455	798391	3547658	sandy loam	SL	SL	0.4
798391	1157455	798391	3547659	sandy loam	SL		
798391	1157455	798391	3547660	gravelly sandy clay loam	GR-SCL		
798391	1157455	798391	3547661	gravelly sandy loam	GR-SL		
798391	1157455	798391	3547662	very gravelly loamy sand	GRV-LS		
798391	1157456	798391	3547998	gravelly sandy loam	GR-SL	GR-SL	0.4
798391	1157456	798391	3547997	gravelly sandy loam	GR-SL		
798390	1157457	798390	3491502	gravelly sandy loam	GR-SL	GR-SL	0.4
798390	1157457	798390	3491503	gravelly sandy loam	GR-SL		
798390	1157457	798390	3491504	gravelly sandy loam	GR-SL		
798390	1157457	798390	3491505	gravelly sandy loam	GR-SL		
798371	1157458	798371	3440260	very gravelly sandy loam	GRV-SL	GRV-SL	0.4
798371	1157458	798371	3440223	very gravelly sandy loam	GRV-SL		

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798382	1157460	798382	3537708	very gravelly coarse sandy loam	GRV-COSL	GRV-COSL	0.4
798382	1157460	798382	3640236	very gravelly coarse sandy loam	GRV-COSL		
798382	1157460	798382	3560006	indurated	IND		
798406	1157462	798406	3548484	extremely gravelly sandy loam	GRX-SL	GRX-SL	0.4
798406	1157462	798406	3548479	extremely gravelly sandy loam	GRX-SL		
798406	1157462	798406	3548478	extremely gravelly sandy loam	GRX-SL		
798406	1157462	798406	3548483	very gravelly coarse sand	GRV-COS		
798406	1157462	798406	3548482	extremely cobbly coarse sand	CBX-COS		
798376	1157464	798376	3544940	very gravelly sandy loam	GRV-SL	GRV-SL	0.4
798376	1157464	798376	3544954	very gravelly sandy loam	GRV-SL		
798376	1157464	798376	3560008	indurated	IND		
798477	1157465	798477	3548626	very stony loam	STV-L	STV-CL	0.04
798477	1157465	798477	3548668	very stony clay loam	STV-CL		
798477	1157465	798477	3560055	unweathered bedrock	UWB		
798360	1157466	798360	3533726	gravelly sandy loam	GR-SL	GR-SL	0.4
798360	1157466	798360	3533727	gravelly sandy loam	GR-SL		
798360	1157466	798360	3533846	gravelly loam	GR-L		
798360	1157466	798360	3533729	gravelly sandy clay loam	GR-SCL		
798476	1157467	798476	3548897	extremely cobbly sandy loam	CBX-SL	CBX-SL	0.4
798476	1157467	798476	3548894	very cobbly sandy loam	CBV-SL		
798476	1157467	798476	3560009	indurated	IND		
798476	1157467	798476	3560057	unweathered bedrock	UWB		
798476	1157468	798476	3547670	sandy loam	SL	SL	0.4
798476	1157468	798476	3547777	sandy loam	SL		
798476	1157468	798476	3547778	gravelly sandy clay loam	GR-SCL		
798476	1157468	798476	3547779	gravelly sandy loam	GR-SL		
798476	1157468	798476	3547780	very gravelly loamy sand	GRV-LS		
798476	1157469	798476	3548727	very cobbly loam	CBV-L	CBV-SICL	0.04
798476	1157469	798476	3576546	very cobbly silty clay loam	CBV-SICL		
798476	1157469	798476	3576548	very cobbly clay	CBV-C		
798476	1157469	798476	3560056	unweathered bedrock	UWB		
798362	1157470	798362	3548943	very gravelly loam	GRV-L	GRV-CL	0.04
798362	1157470	798362	3548944	very gravelly clay loam	GRV-CL		
798362	1157470	798362	3640253	extremely gravelly sandy clay loam	GRX-SCL		
798362	1157470	798362	3560058	unweathered bedrock	UWB		
798368	1157472	798368	3496471	very gravelly sandy loam	GRV-SL	GRX-SCL	0.06
798368	1157472	798368	3889588	extremely gravelly sandy clay loam	GRX-SCL		
798368	1157472	798368	3496470	extremely gravelly sandy clay loam	GRX-SCL		
798368	1157472	798368	3560059	unweathered bedrock	UWB		
798372	1157473	798372	3546197	gravelly loam	GR-L	GR-L	0.25
798372	1157473	798372	3546230	gravelly sandy loam	GR-SL		
798372	1157473	798372	3546231	gravelly sandy clay loam	GR-SCL		
798372	1157473	798372	3560010	indurated	IND		
798372	1157473	798372	3546233	extremely gravelly sand	GRX-S		
798372	1157474	798372	3545661	gravelly sandy loam	GR-SL	GR-SL	0.4
798372	1157474	798372	3545660	gravelly sandy loam	GR-SL		
798372	1157474	798372	3545663	extremely gravelly coarse sandy loam	GRX-COSL		
798372	1157474	798372	3545662	extremely gravelly coarse sandy loam	GRX-COSL		
798407	1157476	798407	3492512	cobbly clay loam	CB-CL	CB-CL	0.04
798407	1157476	798407	3492509	cobbly clay loam	CB-CL		
798407	1157476	798407	3492508	very cobbly clay loam	CBV-CL		

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798407	1157476	798407	3492507	very cobbly clay	CBV-C		
798407	1157476	798407	3492506	unweathered bedrock	UWB		
798396	1157477	798396	3549612	silty clay loam	SICL	CL	0.04
798396	1157477	798396	3549724	clay loam	CL		
798396	1157477	798396	3549722	clay loam	CL		
798396	1157477	798396	3549723	clay loam	CL		
798396	1157477	798396	3549649	silty clay loam	SICL		
798396	1157478	798396	3549418	sandy loam	SL	SL	0.4
798396	1157478	798396	3549417	sandy loam	SL		
798396	1157478	798396	3549422	sandy loam	SL		
798396	1157478	798396	3549416	sandy loam	SL		
798396	1157478	798396	3549421	clay loam	CL		
798396	1157479	798396	4097922	loamy sand	LS	LS	1.2
798396	1157479	798396	4097923	loamy sand	LS		
798396	1157479	798396	4097911	sandy loam	SL		
798396	1157479	798396	4097912	loamy sand	LS		
798366	1157480	798366	3491263	sandy loam	SL	L	0.25
798366	1157480	798366	3491262	loam	L		
798366	1157480	798366	3491261	clay loam	CL		
798366	1157480	798366	3491260	sandy clay loam	SCL		
798366	1157480	798366	3491259	loam	L		
798366	1157481	798366	3494747	sandy loam	SL	SL	0.4
798366	1157481	798366	3889493	sandy loam	SL		
798366	1157481	798366	3494746	sandy loam	SL		
798366	1157481	798366	3494745	loamy sand	LS		
798414	1157482	798414	3550104	sandy loam	SL	L	0.25
798414	1157482	798414	3550109	loam	L		
798414	1157482	798414	3550105	loam	L		
798414	1157482	798414	3550106	clay loam	CL		
798414	1157482	798414	3550113	sandy clay loam	SCL		
798414	1157482	798414	3550112	sandy clay loam	SCL		
798414	1157482	798414	3550111	clay loam	CL		
798414	1157482	798414	3550108	sandy loam	SL		
798414	1157483	798414	3549588	sandy loam	SL	SL	0.4
798414	1157483	798414	3549589	sandy loam	SL		
798414	1157483	798414	3549590	sandy loam	SL		
798414	1157483	798414	3549591	sandy loam	SL		
798385	1157484	798385	3549603	sandy loam	SL	SL	0.4
798385	1157484	798385	3549604	sandy loam	SL		
798385	1157484	798385	3549605	sandy loam	SL		
798385	1157484	798385	3549606	sandy loam	SL		
798385	1157484	798385	3549607	extremely gravelly sand	GRX-S		
798385	1157485	798385	3550114	sandy loam	SL	L	0.25
798385	1157485	798385	3550115	loam	L		
798385	1157485	798385	3550116	loam	L		
798385	1157485	798385	3550117	clay loam	CL		
798385	1157485	798385	3550118	sandy clay loam	SCL		
798385	1157485	798385	3550119	sandy clay loam	SCL		
798385	1157485	798385	3550120	clay loam	CL		
798385	1157485	798385	3550121	sandy loam	SL		
798367	1157486	798367	3494932	gravelly sandy loam	GR-SL	GR-SL	0.4

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798367	1157486	798367	3494931	gravelly sandy loam	GR-SL		
798367	1157486	798367	3494930	gravelly sandy loam	GR-SL		
798367	1157486	798367	3640540	gravelly sandy loam	GR-SL		
798367	1157486	798367	3494929	very gravelly sandy loam	GRV-SL		
798402	1157488	798402	3550360	silt loam	SIL	SIL	0.15
798402	1157488	798402	3550359	silt loam	SIL		
798402	1157488	798402	3550361	silty clay loam	SICL		
798402	1157488	798402	3550389	clay loam	CL		
798392	1157492	798392	3515263	extremely cobbly sandy loam	CBX-SL	CBX-SL	0.4
798392	1157492	798392	3515268	extremely gravelly sandy loam	GRX-SL		
798392	1157492	798392	3891872	very gravelly sandy clay loam	GRV-SCL		
798392	1157492	798392	3515270	very gravelly sandy clay loam	GRV-SCL		
798392	1157492	798392	3560114	weathered bedrock	WB		
798392	1157493	798392	3515021	extremely cobbly sandy loam	CBX-SL	CBX-SL	0.4
798392	1157493	798392	3515020	very gravelly sandy loam	GRV-SL		
798392	1157493	798392	3515019	very gravelly sandy clay loam	GRV-SCL		
798392	1157493	798392	3889437	very cobbly sandy clay loam	CBV-SCL		
798392	1157493	798392	3889436	very cobbly sandy clay loam	CBV-SCL		
798392	1157493	798392	3515018	very cobbly sandy clay loam	CBV-SCL		
798392	1157494	798392	3442348	extremely stony sandy loam	STX-SL	STX-SL	0.4
798392	1157494	798392	3442347	very gravelly sandy loam	GRV-SL		
798392	1157494	798392	3560113	weathered bedrock	WB		
798417	1157496	798417	3534066	extremely stony coarse sandy loam	STX-COSL	STX-COSL	0.4
798417	1157496	798417	3534067	extremely stony coarse sandy loam	STX-COSL		
798417	1157496	798417	3569014	unweathered bedrock	UWB		
798491	1157497	798491	3534504	extremely stony loam	STX-L	CBV-SIL	0.15
798491	1157497	798491	3534509	very cobbly silt loam	CBV-SIL		
798491	1157497	798491	3534505	very cobbly loam	CBV-L		
798491	1157497	798491	3534510	very cobbly sandy loam	CBV-SL		
798491	1157498	798491	3548898	extremely cobbly sandy loam	CBX-SL	CBX-SL	0.4
798491	1157498	798491	3548899	very cobbly sandy loam	CBV-SL		
798491	1157498	798491	3560011	indurated	IND		
798491	1157498	798491	3560061	unweathered bedrock	UWB		
798490	1157499	798490	3553137	extremely stony loam	STX-L	CBV-SIL	0.15
798490	1157499	798490	3534513	very cobbly silt loam	CBV-SIL		
798490	1157499	798490	3534514	very cobbly loam	CBV-L		
798490	1157499	798490	3534515	very cobbly sandy loam	CBV-SL		
798490	1157500	798490	3548938	very gravelly sandy loam	GRV-SL	GRV-SL	0.4
798490	1157500	798490	3548939	very gravelly sandy loam	GRV-SL		
798490	1157500	798490	3560012	indurated	IND		
798490	1157500	798490	3560062	unweathered bedrock	UWB		
798445	1157507	798445	3440230	gravelly sandy loam	GR-SL	GR-SL	0.4
798445	1157507	798445	3440232	very gravelly sandy loam	GRV-SL		
798445	1157507	798445	3440342	very gravelly sandy loam	GRV-SL		
798445	1157507	798445	3440341	very gravelly sandy loam	GRV-SL		
798445	1157508	798445	3544963	very gravelly sandy loam	GRV-SL	GRV-SL	0.4
798445	1157508	798445	3544961	gravelly sandy loam	GR-SL		
798445	1157508	798445	3544962	very gravelly sandy loam	GRV-SL		
798445	1157508	798445	3560014	indurated	IND		
798445	1157508	798445	3544965	extremely gravelly loamy sand	GRX-LS		
798445	1157509	798445	3454275	gravelly coarse sandy loam	GR-COSL	GR-SL	0.4

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798445	1157509	798445	3454274	gravelly sandy loam	GR-SL		
798445	1157509	798445	3454273	gravelly sandy clay loam	GR-SCL		
798445	1157509	798445	3560013	indurated	IND		
798445	1157509	798445	3454271	extremely gravelly sand	GRX-S		
798405	1157510	798405	3550698	very gravelly sandy loam	GRV-SL	GRV-SL	0.4
798405	1157510	798405	3550697	very gravelly sandy loam	GRV-SL		
798405	1157510	798405	3560015	indurated	IND		
798405	1157511	798405	3492716	very cobbly sandy loam	CBV-SL	CBV-SL	0.15
798405	1157511	798405	3890786	very cobbly sandy loam	CBV-SL		
798405	1157511	798405	3492715	very cobbly sandy loam	CBV-SL		
798405	1157511	798405	3890789	extremely gravelly coarse sand	GRX-COS		
798405	1157511	798405	3890788	extremely gravelly coarse sand	GRX-COS		
798405	1157511	798405	3890787	extremely gravelly coarse sand	GRX-COS		
798405	1157511	798405	3548328	extremely gravelly coarse sand	GRX-COS		
798431	1157512	798431	3545013	very gravelly coarse sandy loam	GRV-COSL	GRV-COSL	0.4
798431	1157512	798431	3545012	very gravelly coarse sandy loam	GRV-COSL		
798431	1157512	798431	3545014	very gravelly sandy clay loam	GRV-SCL		
798431	1157512	798431	3560017	indurated	IND		
798431	1157513	798431	3537839	very gravelly sandy loam	GRV-SL	GRV-SL	0.4
798431	1157513	798431	3537838	very gravelly sandy loam	GRV-SL		
798431	1157513	798431	3537837	very gravelly sandy loam	GRV-SL		
798431	1157513	798431	3560016	indurated	IND		
798383	1157517	798383	3949308	extremely gravelly coarse sandy loam	GRX-COSL	GRX-COSL	0.4
798383	1157517	798383	3538943	extremely cobbly coarse sandy loam	CBX-COSL		
798383	1157517	798383	3538945	extremely cobbly coarse sandy loam	CBX-COSL		
798383	1157517	798383	3560018	indurated	IND		
798503	1157518	798503	3440346	very gravelly sandy loam	GRV-SL	GRV-SL	0.4
798503	1157518	798503	3440235	very gravelly sandy loam	GRV-SL		
798503	1157519	798503	3538947	very gravelly sandy loam	GRV-SL	GRV-SL	0.4
798503	1157519	798503	3538948	very gravelly sandy loam	GRV-SL		
798503	1157519	798503	3560020	indurated	IND		
798503	1157520	798503	3443872	gravelly sandy loam	GR-SL	GR-SL	0.4
798503	1157520	798503	3443871	gravelly sandy loam	GR-SL		
798503	1157520	798503	3899998	extremely gravelly sandy loam	GRX-SL		
798503	1157520	798503	3560019	indurated	IND		
798398	1157521	798398	3544905	extremely gravelly sandy loam	GRX-SL	GRX-SL	0.4
798398	1157521	798398	3544901	extremely gravelly sandy loam	GRX-SL		
798398	1157521	798398	3560021	indurated	IND		
798370	1157522	798370	3550807	extremely gravelly sandy loam	GRX-SL	GRX-SL	0.4
798370	1157522	798370	3892482	extremely gravelly sandy loam	GRX-SL		
798370	1157522	798370	3550808	extremely gravelly sandy loam	GRX-SL		
798370	1157522	798370	3560024	indurated	IND		
798370	1157522	798370	3560065	unweathered bedrock	UWB		
798370	1157523	798370	3550748	extremely gravelly sandy loam	GRX-SL	GRX-SL	0.4
798370	1157523	798370	3550749	extremely gravelly sandy loam	GRX-SL		
798370	1157523	798370	3560023	indurated	IND		
798370	1157523	798370	3560064	unweathered bedrock	UWB		
798370	1157524	798370	3496630	very gravelly sandy loam	GRV-SL	GRV-SCL	0.06
798370	1157524	798370	3889619	very gravelly sandy clay loam	GRV-SCL		
798370	1157524	798370	3889618	very gravelly sandy clay loam	GRV-SCL		
798370	1157524	798370	3496629	very gravelly sandy clay loam	GRV-SCL		

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798370	1157524	798370	3560022	indurated	IND		
798370	1157524	798370	3560063	unweathered bedrock	UWB		
798437	1157527	798437	3492865	extremely stony loam	STX-L	STX-L	0.25
798437	1157527	798437	3492864	extremely stony loam	STX-L		
798437	1157527	798437	3560066	unweathered bedrock	UWB		
798378	1157528	798378	3493366	extremely gravelly sandy loam	GRX-SL	GRX-SL	0.4
798378	1157528	798378	3493365	extremely gravelly sandy loam	GRX-SL		
798378	1157528	798378	3560026	indurated	IND		
798378	1157528	798378	3560068	unweathered bedrock	UWB		
798378	1157529	798378	3497676	extremely gravelly sandy loam	GRX-SL	GRX-SL	0.4
798378	1157529	798378	3497675	extremely gravelly sandy loam	GRX-SL		
798378	1157529	798378	3560025	indurated	IND		
798378	1157529	798378	3560067	unweathered bedrock	UWB		
798436	1157531	798436	3550829	very gravelly loam	GRV-L	GRV-L	0.25
798436	1157531	798436	3550828	very gravelly loam	GRV-L		
798436	1157531	798436	3560069	unweathered bedrock	UWB		
798438	1157533	798438	3545668	extremely stony loam	STX-L	STX-L	0.25
798438	1157533	798438	3545669	very cobbly loam	CBV-L		
798438	1157533	798438	3545674	extremely cobbly loam	CBX-L		
798438	1157533	798438	3545675	extremely cobbly sandy clay loam	CBX-SCL		
798438	1157533	798438	3545698	extremely cobbly clay loam	CBX-CL		
798438	1157534	798438	3550834	extremely stony loam	STX-L	STX-L	0.25
798438	1157534	798438	3550836	extremely gravelly sandy loam	GRX-SL		
798438	1157534	798438	3560070	unweathered bedrock	UWB		
798505	1157540	798505	4097918	loamy sand	LS	LS	1.2
798505	1157540	798505	4097919	loamy sand	LS		
798505	1157540	798505	4097920	sandy loam	SL		
798505	1157540	798505	4097921	loamy sand	LS		
798373	1157541	798373	3454367	gravelly sandy loam	GR-SL	GR-SL	0.4
798373	1157541	798373	3454366	gravelly sandy loam	GR-SL		
798373	1157541	798373	3454365	very gravelly sandy loam	GRV-SL		
798373	1157541	798373	3560027	indurated	IND		
798373	1157542	798373	3440239	gravelly sandy loam	GR-SL	GR-SL	0.4
798373	1157542	798373	3440240	gravelly sandy loam	GR-SL		
798373	1157542	798373	3440241	very gravelly sandy loam	GRV-SL		
798373	1157542	798373	3575522	extremely gravelly sandy loam	GRX-SL		
798357	1157543	798357	3523937	very gravelly sandy loam	GRV-SL	GRV-SL	0.4
798357	1157543	798357	3523936	very gravelly sandy loam	GRV-SL		
798357	1157543	798357	3560116	weathered bedrock	WB		
798357	1157544	798357	3440347	very gravelly sandy loam	GRV-SL	GRV-SL	0.4
798357	1157544	798357	3440348	very gravelly sandy loam	GRV-SL		
798357	1157544	798357	3440244	very gravelly sandy loam	GRV-SL		
798357	1157545	798357	3438340	very gravelly sandy loam	GRV-SL	GRV-SL	0.4
798357	1157545	798357	3438339	very gravelly sandy loam	GRV-SL		
798357	1157545	798357	3438338	very gravelly sandy loam	GRV-SL		
798357	1157545	798357	3560115	weathered bedrock	WB		
798357	1157545	798357	3560071	unweathered bedrock	UWB		
798361	1157546	798361	3493446	extremely gravelly sandy loam	GRX-SL	GRX-SL	0.4
798361	1157546	798361	3493445	very gravelly sandy loam	GRV-SL		
798361	1157546	798361	3560118	weathered bedrock	WB		
798361	1157546	798361	3560073	unweathered bedrock	UWB		

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798361	1157547	798361	3550917	very gravelly sandy clay loam	GRV-SCL	GRV-SCL	0.06
798361	1157547	798361	3806808	very gravelly sandy clay loam	GRV-SCL		
798361	1157547	798361	3560117	weathered bedrock	WB		
798361	1157547	798361	3560072	unweathered bedrock	UWB		
798416	1157548	798416	3546248	gravelly sandy clay loam	GR-SCL	GR-SCL	0.04
798416	1157548	798416	3546238	gravelly sandy loam	GR-SL		
798416	1157548	798416	3546239	gravelly sandy clay loam	GR-SCL		
798416	1157548	798416	3560028	indurated	IND		
798416	1157548	798416	3546241	extremely gravelly sand	GRX-S		
798416	1157549	798416	3497735	gravelly sandy clay loam	GR-SCL	GR-SCL	0.04
798416	1157549	798416	3497734	gravelly sandy clay loam	GR-SCL		
798416	1157549	798416	3497733	clay loam	CL		
798416	1157549	798416	3497732	very gravelly sandy loam	GRV-SL		
798416	1157549	798416	3497731	extremely gravelly loamy coarse sand	GRX-LCOS		
798443	1157550	798443	3440354	very gravelly sandy loam	GRV-SL	GRV-SL	0.4
798443	1157550	798443	3440247	very gravelly sandy loam	GRV-SL		
798443	1157551	798443	3545017	very gravelly sandy loam	GRV-SL		
798443	1157551	798443	3545016	very gravelly sandy loam	GRV-SL		
798443	1157551	798443	3545018	extremely gravelly sandy loam	GRX-SL		
798443	1157551	798443	3560029	indurated	IND		
798443	1157552	798443	3454456	extremely gravelly sandy loam	GRX-SL	GRX-SL	0.4
798443	1157552	798443	3454455	gravelly sandy loam	GR-SL		
798443	1157552	798443	3454454	very gravelly sandy loam	GRV-SL		
798443	1157552	798443	3454453	very gravelly loamy sand	GRV-LS		
798412	1157553	798412	3533820	sandy loam	SL	SL	0.4
798412	1157553	798412	3533818	gravelly sandy loam	GR-SL		
798412	1157553	798412	3533819	gravelly sandy clay loam	GR-SCL		
798374	1157554	798374	3534544	very gravelly sandy loam	GRV-SL	GRV-SL	0.4
798374	1157554	798374	3534539	very gravelly sandy loam	GRV-SL		
798374	1157554	798374	3534547	extremely gravelly loamy sand	GRX-LS		
798374	1157554	798374	3534540	extremely gravelly sandy loam	GRX-SL		
798374	1157554	798374	3534545	extremely gravelly loamy sand	GRX-LS		
798374	1157555	798374	3440248	gravelly sandy loam	GR-SL	GR-SL	0.4
798374	1157555	798374	3440250	very gravelly sandy loam	GRV-SL		
798504	1157557	798504	3551113	very gravelly sandy loam	GRV-SL	GR-SCL	0.04
798504	1157557	798504	3551115	gravelly sandy clay loam	GR-SCL		
798504	1157557	798504	3551116	gravelly sandy clay loam	GR-SCL		
798504	1157557	798504	3551114	very gravelly sandy loam	GRV-SL		
798504	1157558	798504	3545292	very gravelly sandy loam	GRV-SL	GRV-SL	0.4
798504	1157558	798504	3545293	very gravelly sandy loam	GRV-SL		
798504	1157558	798504	3560030	indurated	IND		
798512	1157560	798512	3550866	very cobbly sandy loam	CBV-SL	CBV-SL	0.15
798512	1157560	798512	3550865	very cobbly sandy loam	CBV-SL		
798512	1157560	798512	3560074	unweathered bedrock	UWB		
798384	1157563	798384	3442747	very cobbly sandy loam	CBV-SL	CBV-SL	0.15
798384	1157563	798384	3442746	very cobbly coarse sandy loam	CBV-COSL		
798384	1157563	798384	3560075	unweathered bedrock	UWB		
798420	1157567	798420	3442835	very gravelly sandy loam	GRV-SL	GRV-SL	0.4
798420	1157567	798420	3442834	extremely gravelly sandy loam	GRX-SL		
798420	1157567	798420	3442833	extremely gravelly sandy loam	GRX-SL		
798420	1157567	798420	3442832	extremely gravelly loamy sand	GRX-LS		

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798421	1157570	798421	3576622	extremely stony sandy loam	STX-SL	STX-SL	0.4
798421	1157570	798421	3428976	very gravelly sandy loam	GRV-SL		
798421	1157570	798421	3560078	unweathered bedrock	UWB		
798421	1157571	798421	3551118	extremely cobbly sandy loam	CBX-SL	CBX-L	0.25
798421	1157571	798421	3551129	extremely cobbly loam	CBX-L		
798421	1157571	798421	3551117	extremely cobbly sandy loam	CBX-SL		
798488	1157572	798488	3576627	extremely gravelly sandy loam	GRX-SL	GRX-SL	0.4
798488	1157572	798488	3428980	very gravelly sandy loam	GRV-SL		
798488	1157572	798488	3560079	unweathered bedrock	UWB		
798488	1157573	798488	3551164	extremely gravelly loam	GRX-L	GRX-L	0.25
798488	1157573	798488	3551163	extremely gravelly loam	GRX-L		
798488	1157573	798488	3551162	extremely gravelly loam	GRX-L		
798488	1157573	798488	3551165	cemented	CEM		
798506	1157580	798506	3551207	sand	S	S	4.6
798395	1157589	798395	3551137	very gravelly sandy loam	GRV-SL	GRV-SL	0.4
798395	1157589	798395	3551136	very gravelly sandy loam	GRV-SL		
798395	1157589	798395	3551138	very gravelly loam	GRV-L		
798423	1157595	798423	3551140	extremely gravelly sandy loam	GRX-SL	GRX-SL	0.4
798423	1157595	798423	3641673	extremely gravelly sandy loam	GRX-SL		
798423	1157595	798423	3551139	extremely gravelly sandy loam	GRX-SL		
798423	1157595	798423	3641672	extremely gravelly sandy loam	GRX-SL		
798423	1157595	798423	3551141	extremely gravelly loamy sand	GRX-LS		
798424	1157596	798424	3551142	extremely gravelly loam	GRX-L	GRX-L	0.25
798424	1157596	798424	3551144	very gravelly sandy loam	GRV-SL		
798424	1157596	798424	3551143	very gravelly sandy loam	GRV-SL		
798424	1157596	798424	3551145	extremely gravelly loamy sand	GRX-LS		
798424	1157596	798424	3551148	very gravelly loamy sand	GRV-LS		
798422	1157597	798422	3551149	extremely cobbly sandy loam	CBX-SL	CBX-SL	0.4
798422	1157597	798422	3551150	gravelly sandy loam	GR-SL		
798422	1157597	798422	3551151	extremely gravelly sandy loam	GRX-SL		
798487	1157602	798487	3437064	very gravelly sandy loam	GRV-SL	GRV-SL	0.4
798487	1157602	798487	3437063	very gravelly sandy loam	GRV-SL		
798487	1157602	798487	3437062	very gravelly coarse sandy loam	GRV-COSL		
798487	1157602	798487	3560032	indurated	IND		
798487	1157602	798487	3560084	unweathered bedrock	UWB		
798401	1157603	798401	3551297	very gravelly loamy sand	GRV-LS	GRV-LS	1.2
798401	1157603	798401	3551296	very gravelly loamy sand	GRV-LS		
798401	1157603	798401	3551299	gravelly loamy sand	GR-LS		
798401	1157603	798401	3551300	fine sand	FS		
798481	1157605	798481	3455550	extremely cobbly sandy loam	CBX-SL	CBX-SL	0.4
798481	1157605	798481	3455549	extremely cobbly sand	CBX-S		
798358	1157609	798358	3438420	very channery loam	CNV-L		
798358	1157609	798358	3438419	very channery clay loam	CNV-CL		
798358	1157609	798358	3438418	very channery clay	CNV-C		
798358	1157609	798358	3889410	weathered bedrock	WB		
798358	1157609	798358	3560124	weathered bedrock	WB		
798479	1157611	798479	3551362	extremely cobbly sandy loam	CBX-SL	CBX-SL	0.4
798479	1157611	798479	3551379	very gravelly sandy loam	GRV-SL		
798479	1157611	798479	3551380	unweathered bedrock	UWB		
798479	1157612	798479	3455624	extremely cobbly sandy loam	CBX-SL	CBX-SL	0.4
798479	1157612	798479	3455623	extremely gravelly sandy loam	GRX-SL		

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cokey		chkey		Soil Texture		Confining layer	XKSAT
798479	1157612	798479	3455622	extremely gravelly sandy loam	GRX-SL		
798479	1157612	798479	3560085	unweathered bedrock	UWB		
798485	1157618	798485	3430109	sandy loam	SL	L	0.25
798485	1157618	798485	3430108	loam	L		
798485	1157618	798485	3889461	sandy clay loam	SCL		
798485	1157618	798485	3430107	sandy clay loam	SCL		
798485	1157618	798485	3560087	unweathered bedrock	UWB		
798485	1157619	798485	3434034	sandy loam	SL	SL	0.4
798485	1157619	798485	3434033	sandy loam	SL		
798485	1157619	798485	3434032	sandy clay loam	SCL		
798485	1157619	798485	3560086	unweathered bedrock	UWB		
798440	1157624	798440	3454699	very gravelly sandy loam	GRV-SL	GRX-L	0.25
798440	1157624	798440	3454698	extremely gravelly loam	GRX-L		
798440	1157624	798440	3454697	very gravelly sandy loam	GRV-SL		
798440	1157624	798440	3454696	extremely gravelly sandy loam	GRX-SL		
798440	1157625	798440	3429023	gravelly sandy loam	GR-SL	GR-L	0.25
798440	1157625	798440	3429024	gravelly loam	GR-L		
798440	1157625	798440	3560035	cemented	CEM		
798440	1157625	798440	3429026	extremely gravelly sandy loam	GRX-SL		
798415	1157632	798415	3806843	gravelly sandy loam	GR-SL	GR-SCL	0.04
798415	1157632	798415	3892443	gravelly sandy clay loam	GR-SCL		
798415	1157632	798415	3431631	gravelly sandy clay loam	GR-SCL		
798415	1157632	798415	3560038	cemented	CEM		
798415	1157632	798415	3560090	unweathered bedrock	UWB		
798415	1157633	798415	3430784	very gravelly sandy loam	GRV-SL	GR-SCL	0.04
798415	1157633	798415	3430783	gravelly sandy clay loam	GR-SCL		
798415	1157633	798415	3430782	gravelly sandy clay	GR-SC		
798415	1157633	798415	3560037	cemented	CEM		
798415	1157633	798415	3560089	unweathered bedrock	UWB		
798493	1157635	798493	3551562	gravelly clay loam	GR-CL	GR-CL	0.04
798493	1157635	798493	3551561	gravelly clay loam	GR-CL		
798493	1157635	798493	3551560	gravelly clay loam	GR-CL		
798493	1157635	798493	3551579	gravelly clay	GR-C		
798493	1157635	798493	3551580	clay	C		
798493	1157635	798493	3551581	unweathered bedrock	UWB		
798493	1157636	798493	3551730	very cobbly sandy loam	CBV-SL	CBV-CL	0.04
798493	1157636	798493	3551731	very cobbly clay loam	CBV-CL		
798493	1157636	798493	3551732	very cobbly silty clay	CBV-SIC		
798493	1157636	798493	3551733	unweathered bedrock	UWB		
798387	1157639	798387	3445925	silt loam	SIL	SIL	0.15
798387	1157639	798387	3445924	loam	L		
798387	1157639	798387	3445923	clay loam	CL		
798449	1157642	798449	3526100	very gravelly sandy loam	GRV-SL	GRV-SL	0.4
798449	1157642	798449	3526101	very gravelly sandy loam	GRV-SL		
798449	1157642	798449	3526102	unweathered bedrock	UWB		
798411	1157644	798411	3551756	extremely cobbly loam	CBX-L	CBX-CL	0.04
798411	1157644	798411	3551757	extremely cobbly clay loam	CBX-CL		
798411	1157644	798411	3551758	clay	C		
798411	1157644	798411	3560092	unweathered bedrock	UWB		
798441	1157647	798441	3951469	gravelly sandy loam	GR-SL	GR-C	0.01
798441	1157647	798441	3551776	gravelly clay	GR-C		

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798441	1157647	798441	3951471	very gravelly sandy clay	GRV-SC		
798441	1157647	798441	3951544	very gravelly sandy clay loam	GRV-SCL		
798441	1157647	798441	3951676	extremely gravelly coarse sandy loam	GRX-COSL		
798441	1157647	798441	3951677	very gravelly loamy coarse sand	GRV-LCOS		
798484	1157648	798484	3551958	sandy loam	SL	SCL	0.06
798484	1157648	798484	3551959	sandy clay loam	SCL		
798484	1157648	798484	3551969	gravelly coarse sandy loam	GR-COSL		
798484	1157648	798484	3551970	loam	L		
798484	1157650	798484	3643298	sandy loam	SL	SL	0.4
798484	1157650	798484	3643299	sandy loam	SL		
798484	1157650	798484	3643300	sandy clay loam	SCL		
798484	1157650	798484	3643301	unweathered bedrock	UWB		
798393	1157652	798393	3526307	extremely gravelly fine sandy loam	GRX-FSL	GRV-L	0.25
798393	1157652	798393	3526271	very gravelly loam	GRV-L		
798393	1157652	798393	3526275	clay loam	CL		
798393	1157652	798393	3526270	clay	C		
798393	1157652	798393	3526305	cobbly clay	CB-C		
798393	1157652	798393	3526304	cobbly clay	CB-C		
798393	1157652	798393	3560095	unweathered bedrock	UWB		
798393	1157653	798393	3526129	very channery clay loam	CNV-CL	C	0.01
798393	1157653	798393	3526131	clay	C		
798393	1157653	798393	3560094	unweathered bedrock	UWB		
798509	1157654	798509	3631782	gravelly sandy loam	GR-SL	GR-SL	0.4
798509	1157654	798509	3631783	gravelly sandy loam	GR-SL		
798509	1157654	798509	3631786	unweathered bedrock	UWB		
798509	1157655	798509	4170991	sandy loam	SL	SL	0.4
798509	1157655	798509	4170992	sandy loam	SL		
798509	1157655	798509	4170993	sandy clay loam	SCL		
798509	1157655	798509	4170994	unweathered bedrock	UWB		
798498	1157658	798498	3551980	extremely cobbly clay loam	CBX-CL	CBX-C	0.01
798498	1157658	798498	3551981	extremely cobbly clay	CBX-C		
798498	1157658	798498	3560127	weathered bedrock	WB		
798498	1157658	798498	3560096	unweathered bedrock	UWB		
798448	1157659	798448	3552000	very gravelly sandy loam	GRV-SL	GRV-SCL	0.06
798448	1157659	798448	3552001	very gravelly sandy clay loam	GRV-SCL		
798448	1157659	798448	3552004	extremely gravelly sandy loam	GRX-SL		
798448	1157659	798448	3552002	extremely gravelly sandy loam	GRX-SL		
798448	1157659	798448	3552003	extremely gravelly sandy loam	GRX-SL		
798480	1157662	798480	3552010	extremely gravelly loam	GRX-L	GRX-L	0.25
798480	1157662	798480	3552011	extremely cobbly loam	CBX-L		
798480	1157662	798480	3552012	extremely cobbly silty clay loam	CBX-SICL		
798480	1157662	798480	3552013	extremely cobbly silty clay loam	CBX-SICL		
798480	1157662	798480	3560099	unweathered bedrock	UWB		
798425	1157664	798425	3552016	sandy loam	SL	SL	0.4
798425	1157664	798425	3552017	loam	L		
798425	1157664	798425	3552018	clay	C		
798425	1157664	798425	3552020	silty clay	SIC		
798425	1157664	798425	3552019	clay loam	CL		
798483	1157666	798483	3555901	very stony sandy loam	STV-SL	STV-SL	0.4
798483	1157666	798483	3555902	very cobbly sandy loam	CBV-SL		
798483	1157666	798483	3555903	very cobbly loam	CBV-L		

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798483	1157666	798483	3555904	extremely cobbly sandy loam	CBX-SL		
798483	1157667	798483	3436648	very cobbly sandy loam	CBV-SL	CBV-SL	0.15
798483	1157667	798483	3436649	gravelly sandy loam	GR-SL		
798483	1157667	798483	3436650	very gravelly sandy loam	GRV-SL		
798483	1157667	798483	3436669	weathered bedrock	WB		
798381	1161243	798381	3417028	extremely flaggy sandy loam	FLX-SL	FLX-SL	0.4
798381	1161243	798381	3417029	channery fine sandy loam	CN-FSL		
798381	1161243	798381	3417030	extremely flaggy clay	FLX-C		
798381	1161243	798381	3560091	unweathered bedrock	UWB		
798409	1161253	798409	3417098	silt loam	SIL	SIL	0.15
798409	1161253	798409	3576032	silt loam	SIL		
798508	1161258	798508	3642850	very gravelly loam	GRV-L	GR-L	0.25
798508	1161258	798508	3642851	gravelly loam	GR-L		
798508	1161258	798508	3642852	cobbly loam	CB-L		
798508	1161258	798508	3642853	cemented	CEM		
798508	1161258	798508	3642854	indurated	IND		
798508	1161259	798508	3417187	extremely gravelly loam	GRX-L	GR-L	0.25
798508	1161259	798508	3889608	gravelly loam	GR-L		
798508	1161259	798508	3417188	gravelly loam	GR-L		
798508	1161259	798508	3417189	very gravelly loam	GRV-L		
798508	1161259	798508	3889612	gravelly loam	GR-L		
798508	1161259	798508	3417190	gravelly loam	GR-L		
798478	1161266	798478	3576530	very gravelly loam	GRV-L	GRV-L	0.25
798478	1161266	798478	3576525	very gravelly loam	GRV-L		
798478	1161266	798478	3576529	very gravelly silt loam	GRV-SIL		
798478	1161266	798478	3560097	unweathered bedrock	UWB		
798482	1164098	798482	3576500	very cobbly sandy loam	CBV-SL	CBV-SL	0.15
798482	1164098	798482	3436806	very cobbly sandy loam	CBV-SL		
798482	1164098	798482	3436808	very gravelly sandy loam	GRV-SL		
798482	1164098	798482	3436809	weathered bedrock	WB		
798482	1165469	798482	3441358	very stony sandy loam	STV-SL	STV-SL	0.4
798482	1165469	798482	3441359	very cobbly sandy loam	CBV-SL		
798482	1165469	798482	3441360	very cobbly loam	CBV-L		
798482	1165469	798482	3441361	extremely cobbly sandy loam	CBX-SL		
798386	1166042	798386	3442765	very cobbly sandy loam	CBV-SL	CBV-SL	0.15
798386	1166042	798386	3575559	very gravelly sandy loam	GRV-SL		
798386	1166042	798386	3575560	weathered bedrock	WB		
798386	1166042	798386	3560080	unweathered bedrock	UWB		
798423	1168646	798423	3453221	extremely gravelly sand	GRX-S	GRX-S	4.6
798401	1168647	798401	3453222	extremely gravelly loamy sand	GRX-LS	GRX-LS	1.2
798401	1168647	798401	3453223	extremely gravelly sand	GRX-S		
798492	1169176	798492	3455096	loam	L	SIL	0.15
798492	1169176	798492	3892514	silt loam	SIL		
798492	1169176	798492	3892510	silt loam	SIL		
798492	1169176	798492	3455097	silt loam	SIL		
798492	1169177	798492	3455122	loam	L	SIL	0.15
798492	1169177	798492	3455123	silt loam	SIL		
798363	1178731	798363	3551261	extremely gravelly sandy loam	GRX-SL	GRX-SL	0.4
798363	1178731	798363	3551265	gravelly sandy loam	GR-SL		
798363	1178731	798363	3551263	extremely gravelly loamy sand	GRX-LS		
887667	1183959	887667	3572966	loam	L	L	0.25

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887667	1183959	887667	3572967	clay	C		
887667	1183959	887667	3681829	clay	C		
887667	1183959	887667	3638964	sandy clay loam	SCL		
887667	1183959	887667	3572978	loam	L		
887830	1183988	887830	3573032	very cobbly clay loam	CBV-CL	C	0.01
887830	1183988	887830	3573022	clay	C		
887830	1183988	887830	3573036	very gravelly clay	GRV-C		
888383	1184044	888383	3632192	very gravelly loam	GRV-L	GRV-L	0.25
888383	1184044	888383	3632193	cobbly loam	CB-L		
888383	1184044	888383	3632195	unweathered bedrock	UWB		
889257	1184094	889257	3574302	gravelly sandy loam	GR-SL	L	0.25
889257	1184094	889257	3574303	loam	L		
889257	1184094	889257	3963273	gravelly clay	GR-C		
889257	1184094	889257	3963275	weathered bedrock	WB		
889257	1184094	889257	3963274	unweathered bedrock	UWB		
798480	1184631	798480	3576542	extremely cobbly sandy loam	CBX-SL	CBX-SL	0.4
798480	1184631	798480	3576543	extremely gravelly sandy loam	GRX-SL		
798480	1184631	798480	3576544	extremely gravelly sandy loam	GRX-SL		
798480	1184631	798480	3576545	unweathered bedrock	UWB		
887441	1200003	887441	3629213	cobbly loam	CB-L	CB-L	0.25
887441	1200003	887441	3733340	gravelly loam	GR-L		
887441	1200003	887441	3629214	gravelly loam	GR-L		
887441	1200003	887441	3629215	indurated	IND		
887441	1200003	887441	3629216	extremely gravelly sand	GRX-S		
798379	1200008	798379	3629254	very cobbly loam	CBV-L	CL	0.04
798379	1200008	798379	3629255	clay loam	CL		
798379	1200008	798379	3629256	clay	C		
798379	1200008	798379	3629257	unweathered bedrock	UWB		
798379	1200009	798379	3629258	very cobbly silty clay loam	CBV-SICL	CB-SIC	0.02
798379	1200009	798379	3629259	cobbly silty clay	CB-SIC		
798379	1200009	798379	3880142	clay	C		
798379	1200009	798379	3629260	clay	C		
798379	1200009	798379	3629261	clay loam	CL		
798379	1200009	798379	3629262	unweathered bedrock	UWB		
798427	1200154	798427	3629652	loam	L	L	0.25
798427	1200154	798427	3880002	clay	C		
798427	1200154	798427	3629653	clay	C		
798427	1200154	798427	3880003	gravelly clay loam	GR-CL		
798427	1200154	798427	3629655	weathered bedrock	WB		
798427	1200154	798427	3629656	unweathered bedrock	UWB		
798427	1200155	798427	3629657	very gravelly loam	GRV-L	GRV-L	0.25
798427	1200155	798427	3629658	very gravelly sandy loam	GRV-SL		
798427	1200155	798427	3629659	weathered bedrock	WB		
798427	1200155	798427	3629660	unweathered bedrock	UWB		
798507	1200156	798507	3629672	extremely cobbly sandy loam	CBX-SL	GRV-SCL	0.06
798507	1200156	798507	3629673	very gravelly sandy clay loam	GRV-SCL		
798507	1200156	798507	3629674	weathered bedrock	WB		
798507	1200157	798507	3880103	gravelly coarse sandy loam	GR-COSL	GR-COSL	0.4
798507	1200157	798507	3880104	very gravelly sandy loam	GRV-SL		
798507	1200157	798507	3880105	weathered bedrock	WB		
798507	1200157	798507	3880106	unweathered bedrock	UWB		

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798377	1200159	798377	3629679	very cobbly sandy clay loam	CBV-SCL	C	0.01
798377	1200159	798377	3880139	clay	C		
798377	1200159	798377	3629680	clay	C		
798377	1200159	798377	3629681	weathered bedrock	WB		
798377	1200159	798377	3629682	unweathered bedrock	UWB		
887442	1200165	887442	3943887	sandy loam	SL	SCL	0.06
887442	1200165	887442	3629687	sandy clay loam	SCL		
887442	1200165	887442	3629688	coarse sandy loam	COSL		
798380	1200166	798380	3629697	very cobbly loam	CBV-L	CL	0.04
798380	1200166	798380	3629698	clay loam	CL		
798380	1200166	798380	3629699	clay	C		
798380	1200166	798380	3629700	unweathered bedrock	UWB		
888382	1200974	888382	3632196	very gravelly loam	GRV-L	GRV-L	0.25
888382	1200974	888382	3632197	cobbly loam	CB-L		
888382	1200974	888382	3632198	unweathered bedrock	UWB		
888382	1200976	888382	3632990	very gravelly sandy loam	GRV-SL	GRV-SL	0.4
888382	1200976	888382	3632996	gravelly sandy loam	GR-SL		
888382	1200976	888382	3633011	weathered bedrock	WB		
888382	1200976	888382	3633014	unweathered bedrock	UWB		
890226	1201315	890226	3889562	loam	L	L	0.25
890226	1201315	890226	3889565	loam	L		
890226	1201315	890226	3889566	loam	L		
890226	1201319	890226	3963322	sandy loam	SL	SL	0.4
890226	1201319	890226	3963321	sandy loam	SL		
890226	1201319	890226	3963320	sandy loam	SL		
890226	1201319	890226	3633142	gravelly sandy loam	GR-SL		
890226	1201319	890226	3633143	gravelly sandy loam	GR-SL		
890226	1201319	890226	3963323	gravelly loamy sand	GR-LS		
1146330	1216880	1146330	3688870	silty clay loam	SICL	SICL	0.04
1146330	1216880	1146330	3688869	silty clay loam	SICL		
1146330	1216880	1146330	3762864	silt loam	SIL		
1146330	1216880	1146330	3688867	silty clay loam	SICL		
1147394	1220218	1147394	3699304	extremely gravelly silt loam	GRX-SIL	GRX-SIL	0.15
1147394	1220218	1147394	3699305	gravelly loam	GR-L		
1147394	1220218	1147394	3699306	very gravelly loam	GRV-L		
1147394	1220218	1147394	3699307	extremely gravelly loamy sand	GRX-LS		
1147394	1220218	1147394	3699308	very gravelly sandy loam	GRV-SL		
1147394	1220218	1147394	3699309	very gravelly loamy sand	GRV-LS		
1147394	1220219	1147394	3699301	very cobbly sandy loam	CBV-SL	CBV-SL	0.15
1147394	1220219	1147394	3699302	very gravelly sandy loam	GRV-SL		
1147394	1220219	1147394	3699303	very cobbly loamy sand	CBV-LS		
1147394	1220219	1147394	3892460	very gravelly loamy sand	GRV-LS		
1147394	1220219	1147394	3806864	very gravelly sand	GRV-S		
1147387	1220228	1147387	3699332	gravelly sandy loam	GR-SL	SL	0.4
1147387	1220228	1147387	3699333	sandy loam	SL		
1147387	1220228	1147387	3702233	gravelly sandy loam	GR-SL		
1147387	1220228	1147387	3699334	gravelly sandy loam	GR-SL		
1147387	1220228	1147387	3699335	gravelly coarse sandy loam	GR-COSL		
1147387	1220228	1147387	3699336	very gravelly loamy sand	GRV-LS		
1147387	1220229	1147387	3699337	gravelly sandy loam	GR-SL	GR-SL	0.4
1147387	1220229	1147387	3699338	gravelly sandy loam	GR-SL		

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1147387	1220229	1147387	3699339	sandy loam	SL		
1147387	1220229	1147387	3699340	extremely gravelly loamy sand	GRX-LS		
1147387	1220229	1147387	3699341	very gravelly loamy coarse sand	GRV-LCOS		
1147386	1220230	1147386	3699342	gravelly loamy sand	GR-LS	SL	0.4
1147386	1220230	1147386	3702337	sandy loam	SL		
1147386	1220230	1147386	3702336	sandy loam	SL		
1147386	1220230	1147386	3699343	sandy loam	SL		
1147386	1220230	1147386	3699344	gravelly sandy loam	GR-SL		
1147386	1220230	1147386	3702338	very gravelly sandy loam	GRV-SL		
1147386	1220230	1147386	3699345	very gravelly sandy loam	GRV-SL		
1147385	1220231	1147385	3807664	gravelly coarse sandy loam	GR-COSL	GR-COSL	0.4
1147385	1220231	1147385	3699347	very gravelly sandy loam	GRV-SL		
1147385	1220231	1147385	3699348	weathered bedrock	WB		
1147385	1220231	1147385	3699349	unweathered bedrock	UWB		
1147383	1220233	1147383	3699355	extremely cobbly sandy loam	CBX-SL	GRV-SCL	0.06
1147383	1220233	1147383	3699356	very gravelly sandy clay loam	GRV-SCL		
1147383	1220233	1147383	3699357	weathered bedrock	WB		
1147383	1220234	1147383	3699358	very gravelly sandy loam	GRV-SL	SC	0.02
1147383	1220234	1147383	3702389	sandy clay	SC		
1147383	1220234	1147383	3699359	sandy clay	SC		
1147383	1220234	1147383	3699360	gravelly sandy clay	GR-SC		
1147383	1220234	1147383	3699361	weathered bedrock	WB		
1147383	1220234	1147383	3699362	unweathered bedrock	UWB		
1147381	1220244	1147381	3699407	very cobbly loam	CBV-L	CBV-L	0.25
1147381	1220244	1147381	3699408	extremely gravelly loam	GRX-L		
1147381	1220244	1147381	3699409	indurated	IND		
1147381	1220244	1147381	3699410	unweathered bedrock	UWB		
1147380	1220245	1147380	3699411	very gravelly loamy sand	GRV-LS	GRV-SCL	0.06
1147380	1220245	1147380	3699412	very gravelly sandy clay loam	GRV-SCL		
1147380	1220245	1147380	3807749	gravelly clay	GR-C		
1147380	1220245	1147380	3699414	clay	C		
1147380	1220245	1147380	3699415	gravelly sandy clay loam	GR-SCL		
1147380	1220245	1147380	3699416	gravelly loamy sand	GR-LS		
1147379	1220246	1147379	3699417	gravelly loamy sand	GR-LS	SCL	0.06
1147379	1220246	1147379	3699418	sandy clay loam	SCL		
1147379	1220246	1147379	3699419	sandy clay	SC		
1147379	1220246	1147379	3699420	gravelly sandy clay loam	GR-SCL		
1147379	1220246	1147379	3699421	gravelly loamy sand	GR-LS		
1147377	1220248	1147377	3699427	silty clay loam	SICL	SR- SIC	0.02
1147377	1220248	1147377	3892605	stratified silty clay	SR- SIC		
1147377	1220248	1147377	3892597	silt loam	SIL		
1147377	1220248	1147377	3699428	stratified silty clay	SR- SIC		
1147377	1220248	1147377	3892598	silty clay loam	SICL		
1147377	1220248	1147377	3699429	fine sand	FS		
1147388	1221255	1147388	3702093	very gravelly loam	GRV-L	GRV-L	0.25
1147388	1221255	1147388	3702094	very gravelly sandy loam	GRV-SL		
1147388	1221255	1147388	3702095	very gravelly sandy loam	GRV-SL		
1147388	1221255	1147388	3702096	extremely gravelly sandy loam	GRX-SL		
1147388	1221255	1147388	3702097	very gravelly loamy sand	GRV-LS		
887096	1273322	887096	3900357	very gravelly loam	GRV-L	GRV-L	0.25
887096	1273322	887096	3900358	very gravelly loam	GRV-L		

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887096	1273322	887096	3900359	very gravelly clay loam	GRV-CL		
887096	1273322	887096	3900360	very gravelly loam	GRV-L		
887096	1273322	887096	3900361	indurated	IND		
887830	1273335	887830	3900585	very gravelly loam	GRV-L	GRV-L	0.25
887830	1273335	887830	3900586	very gravelly loam	GRV-L		
887830	1273335	887830	3900587	very gravelly clay loam	GRV-CL		
887830	1273335	887830	3900588	very gravelly loam	GRV-L		
887830	1273335	887830	3900589	indurated	IND		
888381	1273339	888381	3938680	gravelly sandy clay loam	GR-SCL	GR-SCL	0.04
888381	1273339	888381	3938679	gravelly sandy clay loam	GR-SCL		
888381	1273339	888381	3938681	clay loam	CL		
888381	1273339	888381	3938682	very gravelly sandy loam	GRV-SL		
888381	1273339	888381	3938683	extremely gravelly loamy coarse sand	GRX-LCOS		
798389	1273352	798389	3900895	gravelly sandy loam	GR-SL	GR-SL	0.4
798389	1273352	798389	3900896	gravelly sandy loam	GR-SL		
798389	1273352	798389	3900897	sandy loam	SL		
798389	1273352	798389	3900898	extremely gravelly loamy sand	GRX-LS		
798389	1273352	798389	3900899	very gravelly loamy coarse sand	GRV-LCOS		
798389	1273380	798389	3901204	sandy loam	SL	SL	0.4
798389	1273380	798389	3901205	loamy sand	LS		
798389	1273380	798389	3901206	stratified loamy sand	SR-LS		
798389	1273380	798389	3901207	gravelly loamy sand	GR-LS		
798432	1273399	798432	3901671	extremely gravelly sandy loam	GRX-SL	GRX-SL	0.4
798432	1273399	798432	3901672	very gravelly sandy loam	GRV-SL		
798432	1273399	798432	3901673	unweathered bedrock	UWB		
798426	1273433	798426	3901854	extremely cobbly loam	CBX-L	CBX-L	0.25
798426	1273433	798426	3901855	very gravelly loam	GRV-L		
798426	1273433	798426	3901856	unweathered bedrock	UWB		
798501	1273510	798501	3902122	extremely gravelly sandy loam	GRX-SL	GRX-SL	0.4
798501	1273510	798501	3902123	very gravelly sandy loam	GRV-SL		
798501	1273510	798501	3902124	unweathered bedrock	UWB		
798499	1273562	798499	3902171	extremely gravelly sandy loam	GRX-SL	GRX-SL	0.4
798499	1273562	798499	3902172	very gravelly sandy loam	GRV-SL		
798499	1273562	798499	3902173	unweathered bedrock	UWB		
798489	1273573	798489	3902194	extremely stony sandy loam	STX-SL	STX-SL	0.4
798489	1273573	798489	3902195	extremely gravelly sandy loam	GRX-SL		
798489	1273573	798489	3902196	indurated	IND		
798489	1273573	798489	3902197	unweathered bedrock	UWB		
798447	1273582	798447	3902539	gravelly sandy loam	GR-SL	GR-SL	0.4
798447	1273582	798447	3902540	gravelly sandy loam	GR-SL		
798447	1273582	798447	3902541	gravelly sandy loam	GR-SL		
798447	1273582	798447	3902542	gravelly loam	GR-L		
798447	1273582	798447	3902543	loam	L		
798447	1273668	798447	3902927	gravelly sandy loam	GR-SL	GR-L	0.25
798447	1273668	798447	3902928	gravelly loam	GR-L		
798447	1273668	798447	3902929	cemented	CEM		
798447	1273668	798447	3902930	extremely gravelly sandy loam	GRX-SL		
798439	1273682	798439	3902932	extremely gravelly coarse sandy loam	GRX-COSL	GR-SL	0.4
798439	1273682	798439	3902933	gravelly sandy loam	GR-SL		
798439	1273682	798439	3902934	gravelly sandy clay loam	GR-SCL		
798439	1273682	798439	3902935	gravelly clay loam	GR-CL		

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798439	1273682	798439	3902936	fine sandy loam	FSL		
798439	1273682	798439	3902937	sandy loam	SL		
798439	1273683	798439	3902962	extremely gravelly sandy loam	GRX-SL	GRX-SL	0.4
798439	1273683	798439	3902963	very gravelly fine sandy loam	GRV-FSL		
798439	1273683	798439	3902964	extremely gravelly sandy loam	GRX-SL		
798439	1273683	798439	3902965	indurated	IND		
798439	1273683	798439	3902966	extremely gravelly coarse sand	GRX-COS		
798433	1273791	798433	3903771	extremely cobbly loam	CBX-L	CBV-CL	0.04
798433	1273791	798433	3903772	very cobbly clay loam	CBV-CL		
798433	1273791	798433	3903773	very cobbly clay	CBV-C		
798433	1273791	798433	3903774	weathered bedrock	WB		
798433	1273791	798433	3903775	unweathered bedrock	UWB		
798408	1273831	798408	3903929	silt loam	SIL	SIL	0.15
798408	1273831	798408	3903930	silt loam	SIL		
798408	1273831	798408	3903931	silt loam	SIL		
798408	1273831	798408	3903932	silt loam	SIL		
798408	1273831	798408	3903933	clay loam	CL		
798408	1273831	798408	3903934	loam	L		
798410	1273858	798410	3903989	gravelly loam	GR-L	L	0.25
798410	1273858	798410	3903990	loam	L		
798410	1273858	798410	3903991	loam	L		
798410	1273858	798410	3903992	clay loam	CL		
798410	1273858	798410	3903993	clay loam	CL		
798410	1273858	798410	3903994	loam	L		
798410	1273858	798410	3903995	loam	L		
798410	1273858	798410	3903996	clay	C		
1398223	1282243	1398223	3941191	very gravelly sandy loam	GRV-SL	GRV-L	0.25
1398223	1282243	1398223	3941192	very gravelly loam	GRV-L		
1398223	1282243	1398223	3941193	unweathered bedrock	UWB		
1398240	1282259	1398240	3941437	gravelly loamy sand	GR-LS	GR-SL	0.4
1398240	1282259	1398240	3941438	gravelly sandy loam	GR-SL		
1398240	1282259	1398240	3941439	gravelly sandy clay	GR-SC		
1398240	1282259	1398240	3941440	gravelly sandy clay loam	GR-SCL		
1398240	1282259	1398240	3941441	very gravelly sand	GRV-S		
1398242	1282303	1398242	3941590	very stony loam	STV-L	STV-L	0.25
1398242	1282303	1398242	3941591	very gravelly loam	GRV-L		
1398242	1282303	1398242	3941592	unweathered bedrock	UWB		
1389782	1282307	1389782	3941666	extremely gravelly loam	GRX-L	GRX-L	0.25
1389782	1282307	1389782	3941627	very gravelly loam	GRV-L		
1389782	1282307	1389782	3941680	weathered bedrock	WB		
1389782	1282307	1389782	3941679	unweathered bedrock	UWB		
1398243	1284792	1398243	3943553	gravelly sandy loam	GR-SL	GR-L	0.25
1398243	1284792	1398243	3943552	gravelly loam	GR-L		
1398243	1284792	1398243	3943551	gravelly loam	GR-L		
1398243	1284792	1398243	3943555	indurated	IND		
1398243	1284792	1398243	3943556	extremely gravelly sand	GRX-S		
1398244	1286606	1398244	3943888	gravelly sandy loam	GR-SL	L	0.25
1398244	1286606	1398244	3943889	loam	L		
1398244	1286606	1398244	3943890	indurated	IND		
1398244	1286610	1398244	3943897	sandy loam	SL	SL	0.4
1398244	1286610	1398244	3943898	sandy loam	SL		

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1398244	1286610	1398244	3943899	sandy clay loam	SCL		
1398244	1286610	1398244	3943900	coarse sandy loam	COSL		
1398244	1286615	1398244	3944175	sandy loam	SL	SL	0.4
1398244	1286615	1398244	3944174	sandy loam	SL		
1398244	1286615	1398244	3944200	gravelly sandy loam	GR-SL		
1398244	1286615	1398244	3944199	gravelly sandy loam	GR-SL		
1398244	1286615	1398244	3944198	gravelly sandy loam	GR-SL		
1398244	1286615	1398244	3944209	extremely gravelly sandy loam	GRX-SL		
1389788	1291889	1389788	3963276	gravelly sandy loam	GR-SL	L	0.25
1389788	1291889	1389788	3963277	loam	L		
1389788	1291889	1389788	3963278	gravelly clay	GR-C		
1389788	1291889	1389788	3963279	weathered bedrock	WB		
1389788	1291889	1389788	3963280	unweathered bedrock	UWB		
1389788	1291893	1389788	3946049	extremely gravelly loam	GRX-L	GRX-L	0.25
1389788	1291893	1389788	3946050	very gravelly loam	GRV-L		
1389788	1291893	1389788	3946052	weathered bedrock	WB		
1389788	1291893	1389788	3946051	unweathered bedrock	UWB		
1400382	1292044	1400382	3947029	extremely cobbly loam	CBX-L	CBX-CL	0.04
1400382	1292044	1400382	3947028	extremely cobbly clay loam	CBX-CL		
1400382	1292044	1400382	3947036	extremely cobbly clay	CBX-C		
1400382	1292044	1400382	3947037	extremely flaggy clay	FLX-C		
1400382	1292044	1400382	3947038	unweathered bedrock	UWB		
1398220	1292380	1398220	3948226	very gravelly loamy sand	GRV-LS	GRV-SCL	0.06
1398220	1292380	1398220	3948227	very gravelly sandy clay loam	GRV-SCL		
1398220	1292380	1398220	3948228	very gravelly loam	GRV-L		
1398220	1292380	1398220	3948229	very gravelly sandy loam	GRV-SL		
1398220	1292396	1398220	3948254	very gravelly loamy sand	GRV-LS	GRV-SCL	0.06
1398220	1292396	1398220	3948255	very gravelly sandy clay loam	GRV-SCL		
1398220	1292396	1398220	3948256	very gravelly sandy loam	GRV-SL		
1398220	1292396	1398220	3948257	gravelly loamy sand	GR-LS		
1398220	1292396	1398220	3948258	gravelly loam	GR-L		
1398220	1292402	1398220	3948286	very gravelly sandy loam	GRV-SL	GRV-C	0.01
1398220	1292402	1398220	3948290	very gravelly clay	GRV-C		
1398220	1292402	1398220	3948287	very gravelly clay	GRV-C		
1398220	1292402	1398220	3948288	very gravelly sandy clay	GRV-SC		
1398220	1292402	1398220	3948289	very gravelly loam	GRV-L		
1398274	1292512	1398274	3963314	sandy loam	SL	SCL	0.06
1398274	1292512	1398274	3963313	sandy clay loam	SCL		
1398274	1292512	1398274	3963312	sandy clay loam	SCL		
1398274	1292512	1398274	3948725	loam	L		
1398274	1292513	1398274	3948733	sandy loam	SL	SL	0.4
1398274	1292513	1398274	3948732	sandy loam	SL		
1398274	1292513	1398274	3948735	very gravelly sandy loam	GRV-SL		
1398275	1292554	1398275	3949250	loam	L	C	0.01
1398275	1292554	1398275	3949258	clay	C		
1398275	1292554	1398275	3949257	clay	C		
1398275	1292554	1398275	3949256	clay	C		
1398275	1292554	1398275	3949265	cemented	CEM		
1398275	1292555	1398275	3948988	gravelly sandy loam	GR-SL	GR-SL	0.4
1398275	1292555	1398275	3948987	gravelly sandy loam	GR-SL		
1398275	1292555	1398275	3948995	very gravelly sandy loam	GRV-SL		

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1398275	1292555	1398275	3948986	gravelly sandy loam	GR-SL		
1398275	1292555	1398275	3949006	indurated	IND		
1398276	1292746	1398276	3949276	extremely gravelly loam	GRX-L	GRX-L	0.25
1398276	1292746	1398276	3949277	very gravelly fine sandy loam	GRV-FSL		
1398276	1292746	1398276	3949278	cemented	CEM		
1398276	1292746	1398276	3949279	indurated	IND		
1398276	1292747	1398276	3949280	extremely gravelly sandy loam	GRX-SL	L	0.25
1398276	1292747	1398276	3949281	loam	L		
1398276	1292747	1398276	3949282	cobbly loam	CB-L		
1398276	1292747	1398276	3949283	indurated	IND		
1398276	1292748	1398276	3949284	very gravelly sandy loam	GRV-SL	GR-L	0.25
1398276	1292748	1398276	3949285	gravelly loam	GR-L		
1398276	1292748	1398276	3949286	very cobbly fine sandy loam	CBV-FSL		
1398276	1292748	1398276	3949287	very cobbly fine sandy loam	CBV-FSL		
1398276	1292748	1398276	3949288	cemented	CEM		
798388	1292759	798388	3949293	sandy loam	SL	SL	0.4
798388	1292759	798388	3949294	sandy loam	SL		
798388	1292759	798388	3949295	gravelly sandy clay loam	GR-SCL		
798388	1292759	798388	3949296	gravelly sandy loam	GR-SL		
798388	1292759	798388	3949297	very gravelly loamy sand	GRV-LS		
798411	1292776	798411	3949333	very cobbly fine sandy loam	CBV-FSL	CB-L	0.25
798411	1292776	798411	3949334	cobbly loam	CB-L		
798411	1292776	798411	3949335	clay	C		
798411	1292776	798411	3949336	cobbly clay	CB-C		
798411	1292776	798411	3949337	unweathered bedrock	UWB		
1146330	1297435	1146330	3963315	sandy loam	SL	SCL	0.06
1146330	1297435	1146330	3963316	sandy clay loam	SCL		
1146330	1297435	1146330	3963317	sandy clay loam	SCL		
1146330	1297435	1146330	3963318	loam	L		
1147390	1304641	1147390	4014668	gravelly sandy loam	GR-SL	GR-L	0.25
1147390	1304641	1147390	4014669	gravelly loam	GR-L		
1147390	1304641	1147390	4014670	cemented	CEM		
1147390	1304641	1147390	4014671	extremely gravelly loamy coarse sand	GRX-LCOS		
889257	1312578	889257	4058083	sandy loam	SL	SCL	0.06
889257	1312578	889257	4058081	sandy clay loam	SCL		
889257	1312578	889257	4058082	coarse sandy loam	COSL		
1507873	1382903	1507873	4323702	gravelly sandy loam	GR-SL	GR-SL	0.4
1507873	1382903	1507873	4323703	gravelly sandy loam	GR-SL		
1507873	1382903	1507873	4323704	sandy loam	SL		
1507873	1382903	1507873	4323705	extremely gravelly loamy sand	GRX-LS		
1507873	1382903	1507873	4323706	very gravelly loamy coarse sand	GRV-LCOS		
1507873	1382904	1507873	4323707	sandy loam	SL	SL	0.4
1507873	1382904	1507873	4323708	loamy sand	LS		
1507873	1382904	1507873	4323709	stratified loamy sand	SR-LS		
1507873	1382904	1507873	4323710	gravelly loamy sand	GR-LS		
1507884	1382906	1507884	4323713	extremely gravelly loamy sand	GRX-LS	GRX-LS	1.2
1507884	1382906	1507884	4323712	extremely gravelly loamy sand	GRX-LS		
1507884	1382906	1507884	4323711	extremely gravelly sand	GRX-S		
1507892	1382908	1507892	4323714	extremely gravelly silt loam	GRX-SIL	GRX-SIL	0.15
1507892	1382908	1507892	4323715	gravelly loam	GR-L		
1507892	1382908	1507892	4323716	very gravelly loam	GRV-L		

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1507892	1382908	1507892	4323717	extremely gravelly loamy sand	GRX-LS		
1507892	1382908	1507892	4323718	very gravelly sandy loam	GRV-SL		
1507892	1382908	1507892	4323719	very gravelly loamy sand	GRV-LS		
1507892	1382909	1507892	4323721	very cobbly sandy loam	CBV-SL	CBV-SL	0.15
1507892	1382909	1507892	4323722	very gravelly sandy loam	GRV-SL		
1507892	1382909	1507892	4323723	very cobbly loamy sand	CBV-LS		
1507892	1382909	1507892	4323724	very gravelly loamy sand	GRV-LS		
1507892	1382909	1507892	4323720	very gravelly sand	GRV-S		
1507906	1382910	1507906	4339821	sandy loam	SL	SCL	0.06
1507906	1382910	1507906	4339822	sandy clay loam	SCL		
1507906	1382910	1507906	4339823	coarse sandy loam	COSL		
1507912	1382913	1507912	4323732	very cobbly sandy clay loam	CBV-SCL	C	0.01
1507912	1382913	1507912	4323736	clay	C		
1507912	1382913	1507912	4323733	clay	C		
1507912	1382913	1507912	4323734	weathered bedrock	WB		
1507912	1382913	1507912	4323735	unweathered bedrock	UWB		
1507915	1382915	1507915	4323737	gravelly sandy loam	GR-SL	GR-L	0.25
1507915	1382915	1507915	4323738	gravelly loam	GR-L		
1507915	1382915	1507915	4323739	cemented	CEM		
1507915	1382915	1507915	4323740	extremely gravelly loamy coarse sand	GRX-LCOS		
1507917	1382916	1507917	4323741	very cobbly loam	CBV-L	CL	0.04
1507917	1382916	1507917	4323742	clay loam	CL		
1507917	1382916	1507917	4323743	clay	C		
1507917	1382916	1507917	4323744	unweathered bedrock	UWB		
1507917	1382917	1507917	4323745	very cobbly silty clay loam	CBV-SICL	CB-SIC	0.02
1507917	1382917	1507917	4323746	cobbly silty clay	CB-SIC		
1507917	1382917	1507917	4323750	clay	C		
1507917	1382917	1507917	4323747	clay	C		
1507917	1382917	1507917	4323748	clay loam	CL		
1507917	1382917	1507917	4323749	unweathered bedrock	UWB		
1507918	1382918	1507918	4323751	very cobbly loam	CBV-L	CL	0.04
1507918	1382918	1507918	4323752	clay loam	CL		
1507918	1382918	1507918	4323753	clay	C		
1507918	1382918	1507918	4323754	unweathered bedrock	UWB		
1507921	1382920	1507921	4323755	loam	L	L	0.25
1507921	1382920	1507921	4323759	clay	C		
1507921	1382920	1507921	4323756	clay	C		
1507921	1382920	1507921	4323760	gravelly clay loam	GR-CL		
1507921	1382920	1507921	4323757	weathered bedrock	WB		
1507921	1382920	1507921	4323758	unweathered bedrock	UWB		
1507921	1382921	1507921	4323761	very gravelly loam	GRV-L	GRV-L	0.25
1507921	1382921	1507921	4323762	very gravelly sandy loam	GRV-SL		
1507921	1382921	1507921	4323763	weathered bedrock	WB		
1507921	1382921	1507921	4323764	unweathered bedrock	UWB		
1507928	1382924	1507928	4323771	gravelly sandy loam	GR-SL	SL	0.4
1507928	1382924	1507928	4323772	sandy loam	SL		
1507928	1382924	1507928	4323770	gravelly sandy loam	GR-SL		
1507928	1382924	1507928	4323773	gravelly sandy loam	GR-SL		
1507928	1382924	1507928	4323774	gravelly coarse sandy loam	GR-COSL		
1507928	1382924	1507928	4323775	very gravelly loamy sand	GRV-LS		
1507928	1382925	1507928	4323776	gravelly sandy loam	GR-SL	GR-SL	0.4

Golden Valley Ranch Technical Drainage Study

cokey		chkey		Soil Texture		Confining layer	XKSAT
1507928	1382925	1507928	4323777	gravelly sandy loam	GR-SL		
1507928	1382925	1507928	4323778	sandy loam	SL		
1507928	1382925	1507928	4323779	extremely gravelly loamy sand	GRX-LS		
1507928	1382925	1507928	4323780	very gravelly loamy coarse sand	GRV-LCOS		
1507929	1382926	1507929	4323784	gravelly loamy sand	GR-LS	SL	0.4
1507929	1382926	1507929	4323782	sandy loam	SL		
1507929	1382926	1507929	4323781	sandy loam	SL		
1507929	1382926	1507929	4323785	sandy loam	SL		
1507929	1382926	1507929	4323786	gravelly sandy loam	GR-SL		
1507929	1382926	1507929	4323783	very gravelly sandy loam	GRV-SL		
1507929	1382926	1507929	4323787	very gravelly sandy loam	GRV-SL		
1507936	1382928	1507936	4323788	gravelly coarse sandy loam	GR-COSL	GR-COSL	0.4
1507936	1382928	1507936	4323789	very gravelly sandy loam	GRV-SL		
1507936	1382928	1507936	4323790	weathered bedrock	WB		
1507936	1382928	1507936	4323791	unweathered bedrock	UWB		
1507996	1382930	1507996	4323795	gravelly sandy loam	GR-SL	L	0.25
1507996	1382930	1507996	4323796	loam	L		
1507996	1382930	1507996	4323797	gravelly clay	GR-C		
1507996	1382930	1507996	4323798	weathered bedrock	WB		
1507996	1382930	1507996	4323799	unweathered bedrock	UWB		
1507996	1382932	1507996	4705139	extremely cobbly coarse sandy loam	CBX-COSL	CBX-COSL	0.4
1507996	1382932	1507996	4705140	gravelly coarse sandy loam	GR-COSL		
1507996	1382932	1507996	4705141	weathered bedrock	WB		
1507996	1382932	1507996	4705142	unweathered bedrock	UWB		
1507947	1382933	1507947	4323804	very gravelly loamy sand	GRV-LS	GRV-SCL	0.06
1507947	1382933	1507947	4323805	very gravelly sandy clay loam	GRV-SCL		
1507947	1382933	1507947	4323806	very gravelly loam	GRV-L		
1507947	1382933	1507947	4323807	very gravelly sandy loam	GRV-SL		
1507947	1382934	1507947	4323808	very gravelly loamy sand	GRV-LS	GRV-SCL	0.06
1507947	1382934	1507947	4323809	very gravelly sandy clay loam	GRV-SCL		
1507947	1382934	1507947	4323810	very gravelly sandy loam	GRV-SL		
1507947	1382934	1507947	4323811	gravelly loamy sand	GR-LS		
1507947	1382934	1507947	4323812	gravelly loam	GR-L		
1507947	1382935	1507947	4323813	very gravelly sandy loam	GRV-SL	GRV-C	0.01
1507947	1382935	1507947	4323817	very gravelly clay	GRV-C		
1507947	1382935	1507947	4323814	very gravelly clay	GRV-C		
1507947	1382935	1507947	4323815	very gravelly sandy clay	GRV-SC		
1507947	1382935	1507947	4323816	very gravelly loam	GRV-L		
1508001	1382937	1508001	4323818	gravelly sandy loam	GR-SL	GRV-SCL	0.06
1508001	1382937	1508001	4323819	very gravelly sandy clay loam	GRV-SCL		
1508001	1382937	1508001	4323820	weathered bedrock	WB		
1508001	1382937	1508001	4323821	weathered bedrock	WB		
1508002	1382938	1508002	4323823	very gravelly sandy loam	GRV-SL	GRV-SL	0.4
1508002	1382938	1508002	4323822	extremely cobbly sandy loam	CBX-SL		
1508002	1382938	1508002	4323825	weathered bedrock	WB		
1508002	1382938	1508002	4323824	unweathered bedrock	UWB		
1508002	1382939	1508002	4323828	gravelly sandy loam	GR-SL	GR-SL	0.4
1508002	1382939	1508002	4323827	extremely gravelly sandy loam	GRX-SL		
1508002	1382939	1508002	4323826	very cobbly sandy clay loam	CBV-SCL		
1508002	1382939	1508002	4323829	weathered bedrock	WB		
1507954	1382940	1507954	4323830	extremely gravelly sandy loam	GRX-SL	GRX-SL	0.4

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cokey		chkey		Soil Texture		Confining layer	XKSAT
1507954	1382940	1507954	4323831	very gravelly sandy loam	GRV-SL		
1507954	1382940	1507954	4323832	unweathered bedrock	UWB		
1507967	1382944	1507967	4323836	very gravelly sandy loam	GRV-SL	GRV-L	0.25
1507967	1382944	1507967	4323837	very gravelly loam	GRV-L		
1507967	1382944	1507967	4323838	unweathered bedrock	UWB		
1507969	1382945	1507969	4323839	extremely cobbly sandy loam	CBX-SL	GRV-SCL	0.06
1507969	1382945	1507969	4323840	very gravelly sandy clay loam	GRV-SCL		
1507969	1382945	1507969	4323841	weathered bedrock	WB		
1507969	1382946	1507969	4323843	very gravelly sandy loam	GRV-SL	SC	0.02
1507969	1382946	1507969	4323842	sandy clay	SC		
1507969	1382946	1507969	4323844	sandy clay	SC		
1507969	1382946	1507969	4323845	gravelly sandy clay	GR-SC		
1507969	1382946	1507969	4323846	weathered bedrock	WB		
1507969	1382946	1507969	4323847	unweathered bedrock	UWB		
1507970	1382948	1507970	4323848	extremely cobbly sandy loam	CBX-SL	GRV-SCL	0.06
1507970	1382948	1507970	4323849	very gravelly sandy clay loam	GRV-SCL		
1507970	1382948	1507970	4323850	weathered bedrock	WB		
1507970	1382949	1507970	4323851	gravelly coarse sandy loam	GR-COSL	GR-COSL	0.4
1507970	1382949	1507970	4323852	very gravelly sandy loam	GRV-SL		
1507970	1382949	1507970	4323853	weathered bedrock	WB		
1507970	1382949	1507970	4323854	unweathered bedrock	UWB		
1507979	1382951	1507979	4323855	extremely gravelly sandy loam	GRX-SL	GRX-SL	0.4
1507979	1382951	1507979	4323856	very gravelly sandy loam	GRV-SL		
1507979	1382951	1507979	4323857	unweathered bedrock	UWB		
1507984	1382952	1507984	4323858	very cobbly loam	CBV-L	CBV-L	0.25
1507984	1382952	1507984	4323859	extremely gravelly loam	GRX-L		
1507984	1382952	1507984	4323860	indurated	IND		
1507984	1382952	1507984	4323861	unweathered bedrock	UWB		
1507999	1382953	1507999	4323862	extremely stony loam	STX-L	CBV-SIL	0.15
1507999	1382953	1507999	4323864	very cobbly silt loam	CBV-SIL		
1507999	1382953	1507999	4323863	very cobbly loam	CBV-L		
1507999	1382953	1507999	4323865	very cobbly sandy loam	CBV-SL		
1507999	1382954	1507999	4323866	extremely cobbly sandy loam	CBX-SL	CBX-SL	0.4
1507999	1382954	1507999	4323867	very cobbly sandy loam	CBV-SL		
1507999	1382954	1507999	4323868	indurated	IND		
1507999	1382954	1507999	4323869	unweathered bedrock	UWB		
1508000	1382955	1508000	4323870	sandy loam	SL	SCL	0.06
1508000	1382955	1508000	4323871	sandy clay loam	SCL		
1508000	1382955	1508000	4323872	gravelly coarse sandy loam	GR-COSL		
1508000	1382955	1508000	4323873	loam	L		
1508000	1382957	1508000	4323874	sandy loam	SL	SL	0.4
1508000	1382957	1508000	4323875	sandy loam	SL		
1508000	1382957	1508000	4323876	sandy clay loam	SCL		
1508000	1382957	1508000	4323877	unweathered bedrock	UWB		
1507994	1382959	1507994	4323883	gravelly loamy sand	GR-LS	SCL	0.06
1507994	1382959	1507994	4323884	sandy clay loam	SCL		
1507994	1382959	1507994	4323885	sandy clay	SC		
1507994	1382959	1507994	4323886	gravelly sandy clay loam	GR-SCL		
1507994	1382959	1507994	4323887	gravelly loamy sand	GR-LS		
1507993	1382960	1507993	4323889	very gravelly loamy sand	GRV-LS	GRV-SCL	0.06
1507993	1382960	1507993	4323890	very gravelly sandy clay loam	GRV-SCL		

**Golden Valley Ranch
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cokey		chkey		Soil Texture		Confining layer	XKSAT
1507993	1382960	1507993	4323888	gravelly clay	GR-C		
1507993	1382960	1507993	4323891	clay	C		
1507993	1382960	1507993	4323892	gravelly sandy clay loam	GR-SCL		
1507993	1382960	1507993	4323893	gravelly loamy sand	GR-LS		
1507991	1382961	1507991	4323894	very gravelly loam	GRV-L	GRV-L	0.25
1507991	1382961	1507991	4323895	very gravelly loam	GRV-L		
1507991	1382961	1507991	4323896	very gravelly clay loam	GRV-CL		
1507991	1382961	1507991	4323897	very gravelly loam	GRV-L		
1507991	1382961	1507991	4323898	indurated	IND		
1507998	1382962	1507998	4323899	silty clay loam	SICL	SR- SIC	0.02
1507998	1382962	1507998	4323904	stratified silty clay	SR- SIC		
1507998	1382962	1507998	4323902	silt loam	SIL		
1507998	1382962	1507998	4323900	stratified silty clay	SR- SIC		
1507998	1382962	1507998	4323903	silty clay loam	SICL		
1507998	1382962	1507998	4323901	fine sand	FS		
1507924	1383019	1507924	4324149	very gravelly loam	GRV-L	GRV-L	0.25
1507924	1383019	1507924	4324150	very gravelly sandy loam	GRV-SL		
1507924	1383019	1507924	4324151	very gravelly sandy loam	GRV-SL		
1507924	1383019	1507924	4324152	extremely gravelly sandy loam	GRX-SL		
1507924	1383019	1507924	4324153	very gravelly loamy sand	GRV-LS		
1507988	1385997	1507988	4337017	gravelly loamy sand	GR-LS	GR-SL	0.4
1507988	1385997	1507988	4337018	gravelly sandy loam	GR-SL		
1507988	1385997	1507988	4337019	gravelly sandy clay	GR-SC		
1507988	1385997	1507988	4337020	gravelly sandy clay loam	GR-SCL		
1507988	1385997	1507988	4337021	very gravelly sand	GRV-S		
1507956	1393798	1507956	4373024	very stony loam	STV-L	STV-L	0.25
1507956	1393798	1507956	4373025	very gravelly loam	GRV-L		
1507956	1393798	1507956	4373026	unweathered bedrock	UWB		
1507939	1393967	1507939	4374162	gravelly sandy loam	GR-SL	GR-SL	0.4
1507939	1393967	1507939	4374161	gravelly sandy loam	GR-SL		
1507939	1393967	1507939	4374164	very gravelly loamy coarse sand	GRV-LCOS		
1507939	1393967	1507939	4374163	gravelly sandy clay loam	GR-SCL		

**Golden Valley Ranch
Technical Drainage Study**

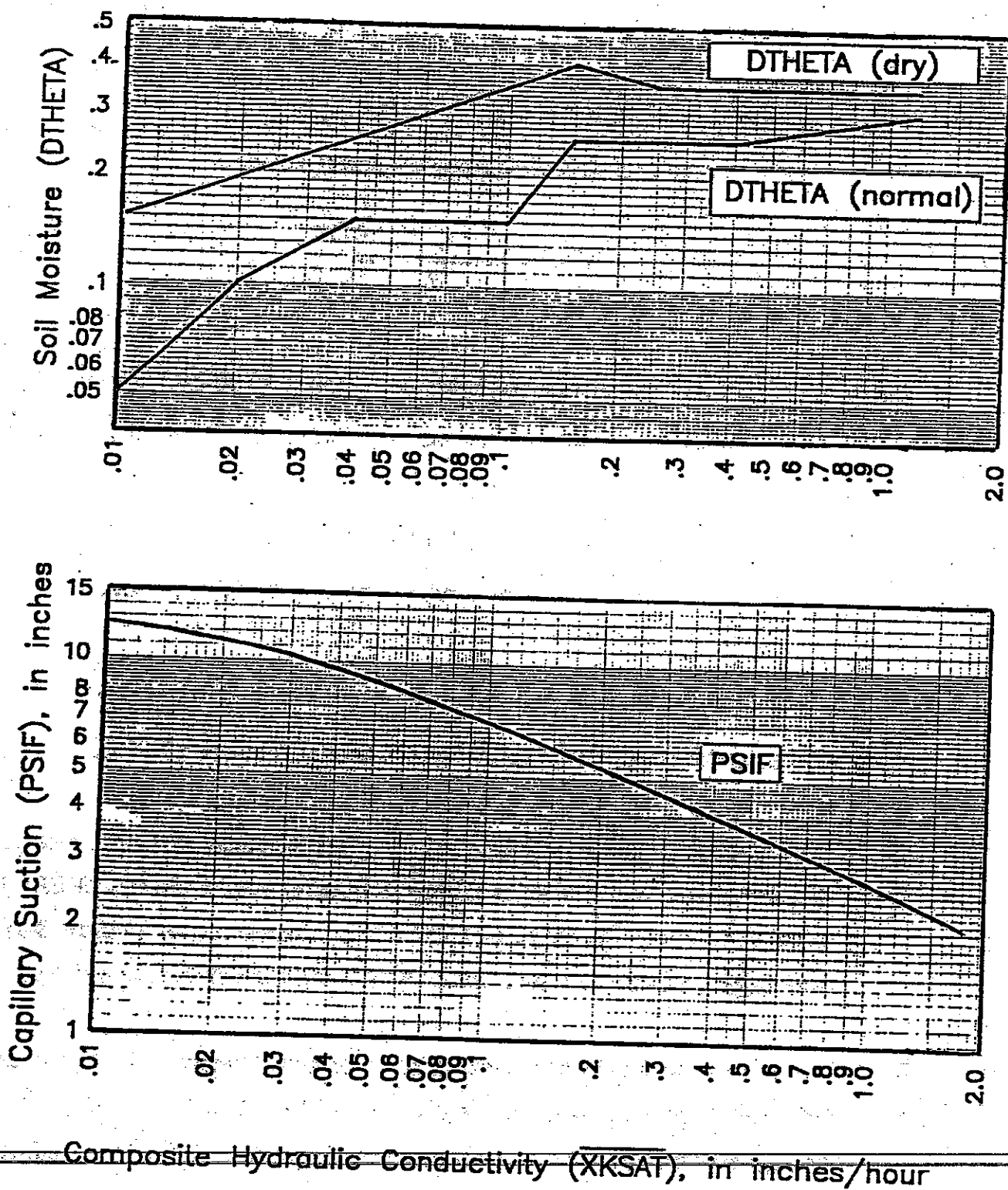
Area (sq mi)	Area1	BASIN TXT	Dtheta	PSIF	XKSAT
0.0215	598820.46	13MileWash-01	0.35	4.8	0.27
0.7827	21820460.19	13MileWash-02	0.39	5.8	0.16
1.5852	44191903.32	13MileWash-03	0.38	5.4	0.20
4.2919	119652267.53	13MileWash-04	0.35	4.9	0.26
1.2028	33531280.91	13MileWashA-01	0.39	5.6	0.17
4.8114	134135050.33	13MileWashA-02	0.38	5.5	0.18
0.4188	11674517.76	13MileWashB-01	0.36	5.2	0.23
0.0570	1590415.47	13MileWashB-02	0.37	5.4	0.21
0.3592	10014036.65	13MileWashB-03	0.39	5.8	0.16
0.0449	1251457.27	13MileWashB-04	0.35	4.1	0.38
6.4185	178938740.34	13MileWashB-05	0.37	5.4	0.21
0.5987	16692069.69	13MileWashB-1A-01	0.4	6.2	0.15
0.1641	4573520.84	13MileWashB-1A-02	0.35	7	0.11
0.1314	3664221.00	13MileWashB-1A-03	0.32	7.5	0.09
0.0439	1222874.48	13MileWashB-1B-01	0.37	6.6	0.12
0.0675	1882302.92	13MileWashB-1B-02	0.35	7.2	0.10
0.1147	3198738.21	13MileWashB-1C-01	0.35	7	0.10
0.0593	1654372.26	13MileWashB-1C-02	0.36	5.2	0.22
0.0375	1046016.37	13MileWashC-01	0.35	4.2	0.37
1.7953	50050905.12	13MileWashC-02	0.39	5.8	0.16
1.1533	32152693.93	13MileWashC-03	0.39	5.8	0.17
5.3401	148873841.13	13MileWashC-04	0.35	4.5	0.30
13.8253	385428429.67	13MileWashCmisc-01	0.35	4.6	0.28
11.6593	325043962.49	13MileWashCmisc-02	0.35	5	0.24
0.9269	25841320.16	Cerbat-01	0.4	6.2	0.14
3.6691	102289951.81	Cerbat-02	0.38	5.5	0.18
10.0830	281098232.37	cerbat-03	0.36	5	0.23
0.5285	14734078.89	CerbatTrib1A-01	0.35	7.2	0.10
0.8467	23604562.69	CerbatTribA-02	0.39	5.8	0.17
0.0269	751192.67	SacTrib6-01	0.35	4.2	0.36
0.0516	1439773.07	SacTrib6-02	0.35	4.5	0.31
0.2335	6510759.79	SacTrib6-03	0.36	5.2	0.22
0.4200	11708838.00	SacTrib6-04	0.36	5	0.24
19.5342	544582702.21	SacTrib6-05	0.37	5.4	0.20
0.2913	8119810.41	SacTrib6C-01	0.305	7.9	0.08
0.1827	5092941.65	SacTrib6C-02	0.29	8.4	0.06
0.2074	5781644.19	SacTrib6C-03	0.305	7.9	0.08
0.2518	7020344.16	SacTrib6C-04	0.32	7.5	0.08
0.2913	8120158.58	SacTrib6D-01	0.27	8.2	0.06
0.4351	12130144.53	SacTrib6D-02	0.27	8.2	0.06
0.6352	17707406.05	SacTrib6misc-01	0.29	8.4	0.06
0.3570	9951908.11	13MileWashE-03	0.35	4.1	0.40
1.2132	33823072.41	MolyMosesA-02	0.35	4.9	0.25
3.8747	108020770.80	HolyMosesA-03	0.35	4.4	0.33
7.8524	218911672.67	HolyMosesA-04	0.39	5.8	0.17
4.2697	119031114.50	HolyMosesA-05	0.35	4.3	0.34
13.3273	371544655.60	HolyMosesA-07	0.35	4.4	0.31
1.1335	31599959.82	Offsite Diverted-01	0.36	5.2	0.23
0.1161	3237668.17	Offsite Diverted-02	0.37	5.3	0.21
4.8070	134011258.03	SacWashA-02	0.4	6.2	0.14
0.4226	11782476.84	SacWashA-03	0.4	6	0.15

**Golden Valley Ranch
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Area (sq mi)	Area1	BASIN_TXT	Dtheta	PSIF	XKSAT
2.1252	59246948.06	SacWashA-04	0.35	7.2	0.10
3.2534	90699043.03	SacWashA-05	0.32	7.5	0.08
1.0804	30119664.05	SacWashA-06	0.39	6.4	0.13
9.8410	274352090.03	SacWashA-07	0.36	6.8	0.12
8.1490	227180971.21	HolyMosesA-06	0.4	6	0.15
5.1930	144771184.51	SacWashA08	0.305	7.9	0.07
8.2644	230397565.60	HolyMosesA-04	0.39	5.8	0.17
10.2545	285879402.73	SacWashA-09	0.37	6.6	0.13
2.7732	77312465.22	SacWashA-10	0.39	6.4	0.14
13.9298	388340569.95	SacWashA-11	0.305	7.9	0.07
18.2356	508380337.44	SacWashA-12	0.4	6	0.15
5.3076	147968686.67	SacWashB-01	0.39	6.4	0.14
10.3994	289918143.24	SacWashC-01	0.38	5.4	0.20
9.6297	268461945.80	SacWashC-02	0.35	4.9	0.26
14.1515	394520757.54	SacWashD-01	0.39	5.8	0.16
1.0617	29599748.90	13MileWashE-01	0.305	7.9	0.08
19.2803	537503459.73	HolyMosesA-08	0.4	6	0.16
2.0957	58425519.68	SacWashE-01	0.35	5	0.25
3.2959	91885234.73	HolyMosesA_01	0.35	4.1	0.39
4.4406	123797707.70	SacWashA_01	0.35	4.5	0.30
1.9345	53931988.07	13MileWashD_02	0.35	4.1	0.40

FIGURE 3-3

COMPOSITE VALUES OF PSIF AND DTHETA AS A FUNCTION OF $XKSAT$
 (To be used for Area Weighted Averaging of Green and Ampt Parameter Values)



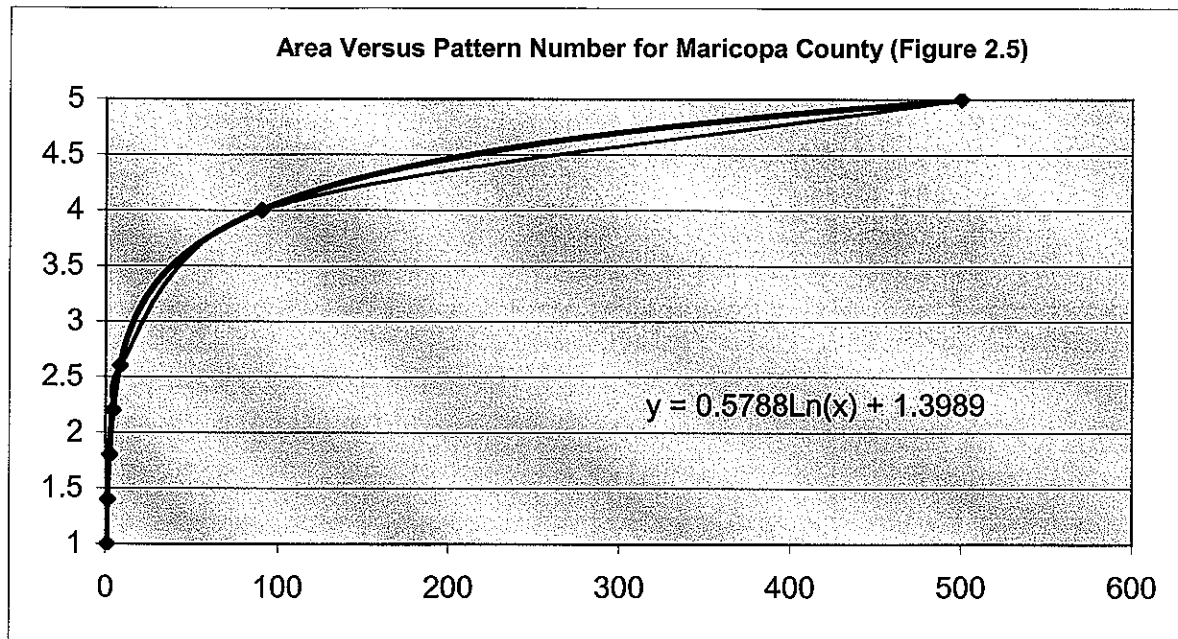
Golden Valley Ranch Technical Drainage Study

Drainage Design Manual for Maricopa County, AZ (Hydrology:Rainfall)

Table 2.4 (6-Hour Distributions)

	Pattern 1	Pattern 2	Pattern 3	Pattern 4	Pattern 5	Locati on	Area (sq mi)	Weighted rain		Pattern
								6hr	24hr	
0	0.0%	0.0%	0.0%	0.0%	0.0%	0				
15	0.8%	0.9%	1.5%	2.1%	2.4%	A	120.95	3.19	4.28	
30	1.6%	1.6%	2.0%	3.5%	4.3%	B	1.06	3.04	4.20	1.43
45	2.5%	2.5%	3.0%	5.1%	5.9%	C	70.71	3.07	4.24	3.86
60	3.3%	3.4%	4.8%	7.1%	7.8%	D	16.86	3.09	4.25	3.03
75	4.1%	4.2%	6.3%	8.7%	9.8%	E	19.95	3.07	4.26	3.13
90	5.0%	5.1%	7.6%	10.5%	11.9%	F	13.83	3.06	4.25	2.92
105	5.8%	5.9%	9.0%	12.5%	14.1%	G	0.36	2.99	4.17	0.80
120	6.6%	6.7%	10.5%	14.3%	16.2%	H	58.39	3.13	4.39	3.75
135	7.4%	7.6%	11.9%	16.0%	18.6%	J	2.10	2.99	4.15	1.83
150	8.7%	8.7%	13.5%	17.9%	21.2%	K	0.12	2.98	4.16	0.15
165	9.9%	10.0%	15.2%	20.1%	23.9%	L	1.13	2.98	4.15	1.47
180	11.8%	12.0%	17.5%	23.2%	27.1%	M	72.81	3.07	4.24	3.88
195	13.8%	16.3%	22.2%	28.1%	32.1%	N	134.49	3.09	4.30	4.24
210	21.6%	25.2%	30.4%	36.4%	40.8%	Q	274.99	3.14	4.29	4.65
225	37.7%	45.1%	47.2%	50.0%	51.5%					
240	83.4%	69.4%	67.0%	65.8%	62.7%					
255	91.1%	83.7%	79.6%	77.3%	73.5%					
270	93.1%	90.0%	86.8%	84.1%	81.4%					
285	95.0%	93.8%	91.2%	88.8%	86.4%					
300	96.2%	95.0%	94.6%	92.7%	90.7%					
315	97.2%	96.3%	96.0%	94.5%	93.0%					
330	98.3%	97.5%	97.3%	96.4%	95.4%					
345	99.1%	98.8%	98.7%	98.2%	97.7%					
360	100.0%	100.0%	100.0%	100.0%	100.0%					

**Golden Valley Ranch
Technical Drainage Study**



Area-Depth Factor

Location	Area (sq mi)	6-hr	24-hr	
A	133.97		0.837	
B	1.06	0.987		
C	70.71	0.833	0.863	
D	16.86	0.919	0.928	
E	19.95	0.910	0.918	
F	13.83	0.929		
G	0.36	0.996		
H	58.39	0.848	0.871	
J	2.10	0.975		
K	0.12	0.993		
L	1.13	0.986		
M	72.81	0.831	0.861	
N	134.49		0.837	
Q	274.99		0.809	
J-HolyMoses-02	53.29	0.854	0.875	use percip from H
J-S26	0.95	0.988	0.995	
J-MG1	1.45	0.984		
JN-5	0.54	0.993		

6-Hour Duration (Table 2.1)

0	1.000
0.5	0.994
1	0.987
2.8	0.975
5	0.960
10	0.940
16	0.922
20	0.910
30	0.890
40	0.870
90	0.810
100	0.800

24-Hour Distribution (Table 2.2)

0	1
10	0.95
20	0.918
30	0.9
40	0.887
50	0.877
60	0.87
70	0.863
80	0.857
90	0.852
100	0.848
110	0.845
120	0.841
130	0.838
140	0.835
150	0.832
200	0.82
250	0.812
300	0.806
400	0.796
500	0.783

**Golden Valley Ranch
Technical Drainage Study**

6-hr Precipitation Distribution													
0	B	C	D	E	F	G	H	J	K	L	M	N	Q
Pattern	1.43	3.86	3.03	3.13	2.92	0.80	3.75	1.83	0.15	1.47	3.88	4.24	4.65
Precip (in)	3.04	3.07	3.09	3.07	3.06	2.99	3.13	2.99	2.98	2.98	3.07	3.09	3.14
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.03	0.06	0.05	0.05	0.04	0.02	0.06	0.02	0.02	0.03	0.06	0.04	0.09
30	0.05	0.10	0.06	0.07	0.06	0.05	0.10	0.05	0.05	0.05	0.10	0.04	0.18
45	0.08	0.15	0.09	0.10	0.09	0.07	0.14	0.07	0.07	0.07	0.15	0.07	0.21
60	0.10	0.21	0.15	0.16	0.14	0.10	0.20	0.10	0.10	0.10	0.21	0.13	0.25
75	0.13	0.26	0.20	0.20	0.19	0.12	0.25	0.12	0.12	0.12	0.26	0.17	0.36
90	0.15	0.31	0.24	0.25	0.23	0.15	0.31	0.15	0.15	0.15	0.31	0.20	0.44
105	0.18	0.37	0.28	0.29	0.27	0.17	0.36	0.17	0.17	0.17	0.37	0.24	0.52
120	0.20	0.42	0.33	0.34	0.31	0.20	0.42	0.20	0.20	0.20	0.43	0.28	0.61
135	0.23	0.47	0.37	0.38	0.35	0.22	0.47	0.22	0.22	0.22	0.48	0.31	0.75
150	0.26	0.53	0.42	0.43	0.40	0.26	0.53	0.26	0.26	0.26	0.53	0.34	0.91
165	0.30	0.60	0.48	0.49	0.45	0.30	0.59	0.30	0.30	0.30	0.60	0.38	1.03
180	0.36	0.69	0.55	0.56	0.52	0.35	0.68	0.35	0.35	0.35	0.69	0.45	1.12
195	0.45	0.84	0.69	0.71	0.66	0.41	0.83	0.40	0.41	0.45	0.84	0.59	1.28
210	0.70	1.09	0.95	0.96	0.91	0.65	1.09	0.63	0.64	0.69	1.10	0.84	1.60
225	1.24	1.52	1.46	1.46	1.44	1.13	1.54	1.09	1.12	1.23	1.52	1.42	1.70
240	2.35	2.03	2.07	2.05	2.05	2.49	2.07	2.56	2.49	2.29	2.02	2.14	1.65
255	2.67	2.38	2.46	2.43	2.44	2.72	2.44	2.76	2.72	2.61	2.38	2.55	1.94
270	2.79	2.59	2.68	2.65	2.66	2.78	2.65	2.80	2.78	2.73	2.59	2.75	2.33
285	2.87	2.74	2.82	2.79	2.79	2.84	2.80	2.84	2.83	2.82	2.73	2.87	2.51
300	2.90	2.86	2.92	2.90	2.90	2.88	2.92	2.88	2.87	2.85	2.85	2.97	2.68
315	2.94	2.91	2.97	2.94	2.94	2.91	2.97	2.91	2.90	2.89	2.91	3.00	2.80
330	2.97	2.97	3.01	2.98	2.98	2.94	3.02	2.94	2.93	2.92	2.96	3.03	2.91
345	3.00	3.02	3.05	3.03	3.02	2.96	3.08	2.96	2.96	2.95	3.02	3.06	3.03
360	3.04	3.07	3.09	3.07	3.06	2.99	3.13	2.99	2.98	2.98	3.07	3.09	3.14

**Golden Valley Ranch
Technical Drainage Study**

24-hr Precipitation Distribution (Type II)										
			A	C	D	E	H	M	N	Q
	0.01	Maricop	4.28	4.24	4.25	4.26	4.39	4.24	4.30	4.29
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.25	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.5	0.00	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
0.75	0.00	0.01	0.03	0.03	0.03	0.03	0.04	0.03	0.03	0.03
1	0.00	0.01	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
1.25	0.00	0.01	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
1.5	0.00	0.02	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
1.75	0.00	0.02	0.09	0.08	0.09	0.09	0.09	0.08	0.09	0.09
2	0.00	0.02	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
2.25	0.00	0.03	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
2.5	0.00	0.03	0.12	0.12	0.12	0.12	0.13	0.12	0.12	0.12
2.75	0.00	0.03	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
3	0.00	0.04	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
3.25	0.00	0.04	0.16	0.16	0.16	0.16	0.17	0.16	0.16	0.16
3.5	0.00	0.04	0.18	0.17	0.17	0.17	0.18	0.17	0.18	0.18
3.75	0.00	0.04	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
4	0.00	0.05	0.21	0.20	0.20	0.20	0.21	0.20	0.21	0.21
4.25	0.00	0.05	0.22	0.22	0.22	0.22	0.23	0.22	0.22	0.22
4.5	0.00	0.06	0.24	0.24	0.24	0.24	0.25	0.24	0.24	0.24
4.75	0.00	0.06	0.26	0.25	0.26	0.26	0.26	0.25	0.26	0.26
5	0.00	0.06	0.27	0.27	0.27	0.27	0.28	0.27	0.28	0.27
5.25	0.00	0.07	0.29	0.29	0.29	0.29	0.30	0.29	0.29	0.29
5.5	0.00	0.07	0.31	0.31	0.31	0.31	0.32	0.31	0.31	0.31
5.75	0.00	0.08	0.33	0.32	0.32	0.32	0.33	0.32	0.33	0.33
6	0.00	0.08	0.34	0.34	0.34	0.34	0.35	0.34	0.34	0.34
6.25	0.00	0.09	0.36	0.36	0.36	0.36	0.37	0.36	0.37	0.36
6.5	0.00	0.09	0.39	0.38	0.38	0.38	0.40	0.38	0.39	0.39
6.75	0.00	0.10	0.41	0.40	0.40	0.40	0.42	0.40	0.41	0.41
7	0.00	0.10	0.43	0.42	0.43	0.43	0.44	0.42	0.43	0.43
7.25	0.00	0.11	0.45	0.45	0.45	0.45	0.46	0.45	0.45	0.45
7.5	0.00	0.11	0.47	0.47	0.47	0.47	0.48	0.47	0.47	0.47
7.75	0.00	0.12	0.49	0.49	0.49	0.49	0.51	0.49	0.49	0.49
8	0.00	0.12	0.51	0.51	0.51	0.51	0.53	0.51	0.52	0.51
8.25	0.00	0.13	0.54	0.53	0.54	0.54	0.55	0.53	0.54	0.54
8.5	0.00	0.13	0.57	0.56	0.57	0.57	0.58	0.56	0.57	0.57
8.75	0.00	0.14	0.60	0.59	0.60	0.60	0.62	0.59	0.60	0.60
9	0.00	0.15	0.63	0.62	0.62	0.63	0.65	0.62	0.63	0.63
9.25	0.00	0.16	0.66	0.66	0.66	0.66	0.68	0.66	0.67	0.66
9.5	0.00	0.16	0.70	0.69	0.69	0.69	0.72	0.69	0.70	0.70
9.75	0.00	0.17	0.74	0.73	0.73	0.73	0.76	0.73	0.74	0.74
10	0.00	0.18	0.77	0.77	0.77	0.77	0.80	0.77	0.78	0.78
10.25	0.00	0.19	0.82	0.81	0.81	0.81	0.84	0.81	0.82	0.82
10.5	0.00	0.20	0.87	0.86	0.86	0.86	0.89	0.86	0.87	0.87
10.75	0.00	0.22	0.93	0.92	0.93	0.93	0.96	0.92	0.94	0.94
11	0.00	0.24	1.01	1.00	1.00	1.01	1.04	1.00	1.01	1.01
11.25	0.00	0.26	1.10	1.09	1.09	1.09	1.13	1.09	1.11	1.10
11.5	0.00	0.28	1.21	1.20	1.20	1.21	1.24	1.20	1.22	1.21
11.75	0.00	0.39	1.66	1.64	1.64	1.65	1.70	1.64	1.66	1.66
12	0.00	0.66	2.84	2.81	2.82	2.82	2.91	2.81	2.85	2.84
12.25	0.00	0.71	3.03	3.00	3.00	3.01	3.11	3.00	3.04	3.03
12.5	0.00	0.74	3.15	3.12	3.12	3.13	3.23	3.12	3.16	3.15
12.75	0.00	0.76	3.24	3.21	3.22	3.23	3.33	3.21	3.26	3.25
13	0.00	0.78	3.32	3.29	3.30	3.31	3.41	3.29	3.34	3.33
13.25	0.00	0.79	3.39	3.35	3.36	3.37	3.48	3.35	3.40	3.39

**Golden Valley Ranch
Technical Drainage Study**

24-hr Precipitation Distribution (Type II)										
			A	C	D	E	H	M	N	Q
13.5	0.00	0.80	3.44	3.41	3.42	3.43	3.53	3.41	3.46	3.45
13.75	0.00	0.82	3.49	3.46	3.46	3.47	3.58	3.46	3.50	3.50
14	0.00	0.83	3.53	3.50	3.51	3.51	3.62	3.50	3.55	3.54
14.25	0.00	0.83	3.57	3.54	3.54	3.55	3.66	3.54	3.59	3.58
14.5	0.00	0.84	3.60	3.57	3.58	3.59	3.70	3.57	3.62	3.61
14.75	0.00	0.85	3.63	3.60	3.61	3.62	3.73	3.60	3.65	3.64
15	0.00	0.86	3.66	3.63	3.64	3.65	3.76	3.63	3.68	3.67
15.25	0.00	0.86	3.69	3.66	3.67	3.68	3.79	3.66	3.71	3.70
15.5	0.00	0.87	3.72	3.68	3.69	3.70	3.82	3.68	3.74	3.73
15.75	0.00	0.88	3.75	3.71	3.72	3.73	3.84	3.71	3.76	3.75
16	0.00	0.88	3.77	3.74	3.74	3.75	3.87	3.74	3.79	3.78
16.25	0.00	0.89	3.80	3.76	3.77	3.78	3.90	3.76	3.81	3.81
16.5	0.00	0.89	3.82	3.79	3.80	3.80	3.92	3.79	3.84	3.83
16.75	0.00	0.90	3.84	3.81	3.82	3.83	3.95	3.81	3.86	3.85
17	0.00	0.90	3.86	3.83	3.84	3.85	3.97	3.83	3.88	3.87
17.25	0.00	0.91	3.89	3.85	3.86	3.87	3.99	3.85	3.90	3.90
17.5	0.00	0.91	3.91	3.87	3.88	3.89	4.01	3.87	3.93	3.92
17.75	0.00	0.92	3.93	3.89	3.90	3.91	4.03	3.89	3.95	3.94
18	0.00	0.92	3.95	3.91	3.92	3.93	4.05	3.91	3.96	3.96
18.25	0.00	0.93	3.96	3.93	3.94	3.94	4.07	3.93	3.98	3.97
18.5	0.00	0.93	3.98	3.94	3.95	3.96	4.09	3.94	4.00	3.99
18.75	0.00	0.93	4.00	3.96	3.97	3.98	4.10	3.96	4.02	4.01
19	0.00	0.94	4.01	3.98	3.99	4.00	4.12	3.98	4.03	4.02
19.25	0.00	0.94	4.03	3.99	4.00	4.01	4.14	3.99	4.05	4.04
19.5	0.00	0.95	4.05	4.01	4.02	4.03	4.16	4.01	4.07	4.06
19.75	0.00	0.95	4.07	4.03	4.04	4.05	4.17	4.03	4.09	4.08
20	0.00	0.95	4.08	4.04	4.05	4.06	4.19	4.04	4.10	4.09
20.25	0.00	0.96	4.09	4.05	4.06	4.07	4.20	4.05	4.11	4.10
20.5	0.00	0.96	4.10	4.07	4.08	4.09	4.21	4.07	4.12	4.11
20.75	0.00	0.96	4.12	4.08	4.09	4.10	4.23	4.08	4.14	4.13
21	0.00	0.97	4.13	4.09	4.10	4.11	4.24	4.09	4.15	4.14
21.25	0.00	0.97	4.14	4.10	4.11	4.12	4.25	4.10	4.16	4.15
21.5	0.00	0.97	4.16	4.12	4.13	4.14	4.27	4.12	4.18	4.17
21.75	0.00	0.97	4.17	4.13	4.14	4.15	4.28	4.13	4.19	4.18
22	0.00	0.98	4.18	4.14	4.15	4.16	4.29	4.14	4.20	4.19
22.25	0.00	0.98	4.19	4.16	4.17	4.17	4.31	4.16	4.21	4.20
22.5	0.00	0.98	4.21	4.17	4.18	4.19	4.32	4.17	4.23	4.22
22.75	0.00	0.99	4.22	4.18	4.19	4.20	4.33	4.18	4.24	4.23
23	0.00	0.99	4.23	4.19	4.20	4.21	4.35	4.19	4.25	4.24
23.25	0.00	0.99	4.25	4.21	4.22	4.23	4.36	4.21	4.27	4.26
23.5	0.00	1.00	4.26	4.22	4.23	4.24	4.37	4.22	4.28	4.27
23.75	0.00	1.00	4.27	4.23	4.24	4.25	4.39	4.23	4.29	4.28
24	1.00	1.00	4.28	4.24	4.25	4.26	4.39	4.24	4.30	4.29

**Golden Valley Ranch
Technical Drainage Study**

	Area (ft ²)	Area (mi ²)	Length (ft)	Length (mi)	Centroid Length (ft)	Centroid Length (mi)	Top Elev	Bottom Elev	Elev Diff	Slope (ft/mi)	Slope (%)	Tc (hr)	Tc (min)	R
SacWashE-01	29599749	1.06	14979	2.84	8119	1.54	2630	2480	150	48.9790	0.93%	1.60	96.14	1.39
SacWashA-02	134011258	4.81	20777	3.94	14445	2.74	2620	2450	170	41.9266	0.79%	2.41	144.56	1.20
SacWashA-03	11782477	0.42	9082	1.72	6360	1.20	2760	2620	140	57.7389	1.09%	1.17	70.43	1.11
SacWashA-04	59246948	2.13	19991	3.79	9986	1.89	2875	2660	215	54.9515	1.04%	1.90	113.98	1.42
SacWashA-05	90699043	3.25	23378	4.43	11669	2.21	3020	2755	265	56.3798	1.07%	2.13	127.94	1.44
SacWashA-06	30119664	1.08	13361	2.53	9945	1.88	3000	2810	190	72.1779	1.37%	1.52	91.11	1.18
SacWashB-01	147968687	5.31	21454	4.06	12306	2.33	4400	2990	1410	196.6517	3.72%	1.73	103.80	0.81
SacWashA-07	274352090	9.84	31454	5.96	27828	5.27	3400	2810	590	83.0358	1.57%	2.95	177.03	1.39
SacWashA-08	144771184	5.19	39654	7.51	17055	3.23	3840	2840	1000	99.4451	1.88%	2.50	150.18	2.01
SacWashA-09	285879403	10.25	52974	10.03	28079	5.32	4600	2860	1740	107.4644	2.04%	3.21	192.75	2.27
SacWashA-11	388340570	13.93	40008	7.58	21313	4.04	3950	2960	990	106.9435	2.03%	2.89	173.10	1.35
SacWashA-12	508380338	18.24	62455	11.83	28066	5.32	5060	3080	1980	100.2296	1.90%	3.60	215.71	2.11
SacWashA-12	289918143	10.40	72656	13.76	33888	6.42	6400	3120	3280	143.4842	2.72%	3.44	206.64	3.13
SacWashA-12	268461945	9.63	63372	12.00	24796	4.70	6880	3120	3760	146.2960	2.77%	3.04	182.57	2.56
SacWashD-01	394520758	14.15	81719	15.48	34089	6.46	7000	2780	4220	104.1779	1.97%	3.91	234.32	3.32
SacWashA-10	77312465	2.77	22405	4.24	10408	1.97	3160	2910	250	56.0394	1.06%	2.02	121.22	1.44
Offsite Diverted-02	31599960	1.13	8455	1.60	4260	0.81	2700	2560	140	83.4078	1.58%	1.07	64.18	0.54
Offsite Diverted-01	3237668	0.12	3181	0.60	1998	0.38	2950	2620	330	195.5571	3.70%	0.47	27.93	0.36
HolyMosesA-02	33823072	1.21	18918	3.58	16072	3.04	2920	2640	280	75.2405	1.43%	1.87	112.43	1.85
13MileWashE-03	9951908	0.36	7083	1.34	2548	0.48	2760	2660	100	70.5767	1.34%	0.83	49.74	0.68
HolyMosesA-03	108020771	3.87	21617	4.09	10105	1.91	4120	2920	1200	164.7413	3.12%	1.66	99.39	0.92
HolyMosesA-05	119031114	4.27	25256	4.78	13053	2.47	3960	3080	880	125.0076	2.37%	1.96	117.55	1.19
HolyMosesA-07	371544656	13.33	45292	8.58	25427	4.82	4900	3400	1500	133.2136	2.52%	2.96	177.80	1.58
HolyMosesA-08	537503461	19.28	72340	13.70	42862	8.12	8160	3180	4980	202.9523	3.84%	3.62	217.24	2.32
HolyMosesA-06	227180971	8.15	49071	9.29	30363	5.75	6000	3200	2800	241.2147	4.57%	2.67	160.31	1.98
HolyMosesA-04	230397565	8.26	49533	9.38	24760	4.69	4500	3040	1460	142.3288	2.70%	2.83	169.93	2.11
13MileWash-01	598820	0.02	1965	0.37	1275	0.24	2490	2475	15	40.069	0.76%	0.43	25.67	0.58
13MileWashC-01	1046016	0.04	2796	0.53	1519	0.29	2510	2490	20	37.722	0.71%	0.52	31.34	0.70
13MileWashC-04	148873841	5.34	34144	6.47	18660	3.53	5360	2865	2495	229.845	4.35%	2.09	125.48	1.44
13MileWash-04	119652268	4.29	39794	7.54	15268	2.89	5320	2835	2485	195.574	3.70%	2.09	125.30	1.84
13MileWashCmisc-01	385428430	13.83	40086	7.59	20042	3.80	4200	2505	1695	94.638	1.79%	2.91	174.64	1.37
13MileWashCmisc-02	325043963	11.66	40434	7.66	17458	3.31	4800	2580	2220	127.573	2.42%	2.61	156.58	1.35
13MileWashB-05	178938741	6.42	40522	7.67	17512	3.32	5400	2815	2585	156.353	2.96%	2.36	141.82	1.70
13MileWash-02	21820460	0.78	18947	3.59	9611	1.82	2700	2490	210	56.317	1.07%	1.67	100.31	2.09
13MileWash-03	44191903	1.59	25954	4.92	12566	2.38	2960	2580	380	72.774	1.38%	1.97	118.31	2.16
13MileWashC-03	32152694	1.15	20385	3.86	9411	1.78	2875	2505	370	74.226	1.41%	1.67	99.97	1.77
13MileWashC-02	50050905	1.80	19824	3.75	9637	1.83	2765	2640	125	64.091	1.21%	1.79	107.49	1.46

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Regional Tc Calcs.xls

**Golden Valley Ranch
Technical Drainage Study**

	Area (ft ²)	Area (mi ²)	Length (ft)	Length (mi)	Centroid Length (ft)	Centroid Length (mi)	Top Elev	Bottom Elev	Elev Diff	Slope (ft/mi)	Slope (%)	Tc (hr)	Tc (min)	R
13MileWashB-1A-02	4573521	0.16	7679	1.45	3435	0.65	2890	2760	130	87.971	1.67%	0.81	48.41	1.10
13MileWashB-1C-01	3198738	0.11	6998	1.33	2491	0.47	2870	2755	115	84.6411	1.60%	0.71	42.45	1.08
13MileWashB-1C-02	1654372	0.06	2282	0.43	1073	0.20	2815	2785	30	69.2491	1.31%	0.42	25.32	0.36
13MileWashB-1A-01	16692070	0.60	11900	2.25	6002	1.14	2830	2660	170	73.7198	1.40%	1.22	73.24	1.18
13MileWashA-02	134135050	4.81	39097	7.40	16407	3.11	4080	2810	1270	112.7837	2.14%	2.39	143.42	1.97
13MileWashA-01	33531281	1.20	24909	4.72	12676	2.40	3025	2675	350	69.3455	1.31%	1.92	115.26	2.38
13MileWashB-1B-02	1892303	0.07	3097	0.59	1565	0.30	2830	2780	50	84.2754	1.60%	0.49	29.25	0.51
13MileWashB-02	1590416	0.06	2869	0.54	1390	0.26	2695	2660	35	64.4069	1.22%	0.48	28.91	0.52
13MileWashB-01	11674518	0.42	13313	2.52	6631	1.26	2730	2580	150	56.7770	1.08%	1.31	78.50	1.72
13MileWashB-1B-01	1222874	0.04	2179	0.41	1130	0.21	2790	2750	40	96.6265	1.83%	0.38	23.02	0.37
13MileWashB-1A-03	3664221	0.13	6660	1.26	3268	0.62	2980	2850	130	102.0826	1.93%	0.73	43.81	1.00
Cerbat-03	281098232	10.08	65753	12.45	22733	4.31	5040	2760	2280	116.1901	2.20%	3.16	189.68	2.67
Cerbat-02	102289952	3.67	33758	6.39	17792	3.37	2940	2550	390	58.9250	1.12%	2.61	156.35	2.25
CerbatTribA-02	23604563	0.85	18140	3.44	9021	1.71	2865	2630	235	67.4343	1.28%	1.58	94.96	1.82
Cerbat-01	25841320	0.93	12957	2.45	6601	1.25	2600	2475	125	50.0168	0.95%	1.44	86.49	1.19
CerbatTrib1A-01	14734079	0.53	6997	1.33	5015	0.95	2630	2555	75	55.1849	1.04%	1.07	64.17	0.72
SacTrib6misc-01	17707406	0.64	15920	3.02	8455	1.60	3000	2800	200	54.4336	1.03%	1.53	91.71	1.86
SacTrib6-01	751193	0.03	2264	0.43	1164	0.22	2640	2620	20	46.6509	0.88%	0.43	25.79	0.58
SacTrib6D-01	8120159	0.29	10771	2.04	5454	1.03	2910	2790	120	55.9701	1.06%	1.14	68.57	1.53
SacTrib6-05	544582702	19.53	72872	13.80	36209	6.86	5300	2795	2505	103.4852	1.96%	3.98	239.05	2.57
SacTrib6D-02	12130144	0.44	12486	2.36	6319	1.20	2965	2815	150	63.0325	1.19%	1.25	75.04	1.52
SacTrib6C-03	5781644	0.21	5131	0.97	2618	0.50	2850	2790	60	59.2416	1.12%	0.76	45.32	0.65
SacTrib6C-04	7020344	0.25	8212	1.56	4185	0.79	2925	2830	95	60.4490	1.14%	0.97	58.20	1.12
SacTrib6-04	11708838	0.42	9616	1.82	4541	0.86	2840	2725	115	62.1609	1.18%	1.08	64.67	1.07
SacTrib6C-01	8119810	0.29	8509	1.61	4335	0.82	2765	2670	95	54.5432	1.03%	1.02	61.36	1.12
SacTrib6C-02	5092942	0.18	4863	0.92	2454	0.46	2795	2735	60	64.9702	1.23%	0.71	42.64	0.62
SacTrib6-03	6510760	0.23	8197	1.55	4088	0.77	2765	2670	95	60.0869	1.14%	0.96	57.47	1.15
SacTrib6-02	1439773	0.05	2160	0.41	1497	0.28	2670	2640	30	70.9900	1.34%	0.44	26.64	0.40
13MileWashB-04	1251457	0.04	4458	0.84	409	0.08	2815	2755	60	67.6220	1.28%	0.38	22.99	0.65
13MileWashB-03	10014037	0.36	6648	1.26	5221	0.99	2760	2670	90	70.6341	1.34%	0.98	58.60	0.78

Golden Valley Ranch Technical Drainage Study

Muskingum Calculations (wide rectangular channel assumed)

Status $1/(2*(1-X)) \leq K/(NSTPS*TIME \text{ INTERVAL}) \leq 1/(2*X)$

Time interval (min)		2											5	
Assumed Depth (ft)		1											1	
Identification	Length h	Slope%	n	Velocity	Adj. Velocity	NSTPS	K	X	1/(2*(1-X))	K/(NSTPS*TIME)	1/(2*X)	STATUS		
R-J-SacWash-02	3182	1.0371	0.035	4.3	2.7	2	0.326206	0.15	0.58823529	1.957238731	3.33333	OK		
R-J-SacWash-03	10917	0.9068	0.035	4.1	2.5	5	1.196841	0.15	0.58823529	2.872419509	3.33333	OK		
R-J-SacWash-04	6541	0.902	0.035	4.0	2.5	3	0.719018	0.15	0.58823529	2.876070099	3.33333	OK		
R-J-SacWash-05	3159	1.4562	0.035	5.1	3.2	1	0.273303	0.15	0.58823529	3.279638884	3.33333	OK		
R-J-SacWash-06	2554	0.5873	0.035	3.3	2.0	2	0.347924	0.15	0.58823529	2.087546788	3.33333	OK		
R-J-SacWash-07	4938	0.6075	0.035	3.3	2.1	8	0.661402	0.15	0.58823529	0.99210244	3.33333	OK		
R-J-SacWash-08	4097	1.3424	0.035	4.9	3.1	2	0.369162	0.15	0.58823529	2.214971331	3.33333	OK		
R-SacWashA-11	11765	1.071	0.035	4.4	2.8	6	1.186867	0.15	0.58823529	2.373733059	3.33333	OK		
R-J-SacWash-01	17092	0.9537	0.035	4.2	2.6	7	1.827237	0.15	0.58823529	3.132405572	3.33333	OK		
R-J-SacWash-09	19820	0.9132	0.035	4.1	2.5	8	2.165287	0.15	0.58823529	3.247930329	3.33333	OK		
R-J-SacWashB-11	13178	1.3356	0.035	4.9	3.1	5	1.190466	0.15	0.58823529	2.8571196	3.33333	OK		
R-J-SacWashD-01	3231	0.9595	0.035	4.2	2.6	2	0.344369	0.15	0.58823529	2.066213041	3.33333	OK		
J11-12	18740	1.4781	0.035	5.2	3.2	6	1.609214	0.15	0.58823529	3.218427636	3.33333	OK		
R-J-HolyMoses-02	7071	1.7395	0.035	5.6	3.5	3	0.559716	0.15	0.58823529	2.238865218	3.33333	OK		
J13-14	3219	1.1494	0.035	4.6	2.9	2	0.313458	0.15	0.58823529	1.880750176	3.33333	OK		
J14-15	4004	2.1229	0.035	6.2	3.9	3	0.286900	0.15	0.58823529	1.147600925	3.33333	OK		
R-SacWashA-01	13503	0.0518	0.035	1.5	1.0	15	3.900398	0.15	0.58823529	3.120318763	3.33333	OK		
R-HolyMosesA-01	18392	1.1962	0.035	4.7	2.9	7	1.755623	0.15	0.58823529	3.009640073	3.33333	OK		
R-13MileWashD-02	19358	1.0332	0.035	4.3	2.7	8	1.988268	0.15	0.58823529	2.982402449	3.33333	OK		
R-Conf1-13Mil-C	2101	0.9519	0.035	4.2	2.6	1	0.224814	0.15	0.58823529	2.697767911	3.33333	OK		
R-J-L	6906	0.6226	0.035	3.4	2.1	6	0.913703	0.15	0.58823529	1.827405328	3.33333	OK		
R-J-M	8498	0.7884	0.035	3.8	2.4	6	0.999164	0.15	0.58823529	1.998328776	3.33333	OK		
R-HolyMosesA-02	18229	1.2	0.035	4.7	2.9	7	1.737312	0.15	0.58823529	2.978249453	3.33333	OK		
R-SacWashE-01	24419	1.15	0.035	4.6	2.9	9	2.377306	0.15	0.58823529	3.169740671	3.33333	OK		

Golden Valley Ranch Technical Drainage Study

Identification	Length h	Slope%	n	Velocity	Adj. Velocity	NSTPS	K	X	1/(2*(1-X))	K/(NSTPS*TIME)	1/(2*X)	STATUS
R-HM_Div03	8695	1.4951	0.035	5.2	3.3	4	0.742390	0.15	0.58823529	2.22716922	3.33333	OK
R-HM_Div02	3626	1.3789	0.035	5.0	3.1	2	0.322371	0.15	0.58823529	1.934222595	3.33333	OK
R-Div02	24121	0.9328	0.035	4.1	2.6	10	2.607360	0.15	0.58823529	3.128831734	3.33333	OK
R-HM_Div01	6361	1.4149	0.035	5.1	3.2	3	0.558298	0.15	0.58823529	2.233192125	3.33333	OK
R-Div01	4860	1.3374	0.035	4.9	3.1	2	0.438730	0.15	0.58823529	2.632377886	3.33333	OK
R-J-S26	2564	0.78	0.035	3.8	2.3	2	0.303083	0.15	0.58823529	1.818496802	3.33333	OK
R-Ex Shed C	15439	1.1011	0.035	4.5	2.8	6	1.536044	0.15	0.58823529	3.072087234	3.33333	OK
R-Ex Shed D	9403	2.0738	0.035	6.1	3.8	3	0.681682	0.15	0.58823529	2.726726618	3.33333	OK

GOLDEN VALLEY RANCH

APPENDIX C

HYDRAULICS

HEC-RAS Diversion Channel Analysis for the Holy Moses Wash

HEC-RAS Analysis for Holy Moses Diversion Wash 1 – Base Flood Elevation (BFE)

Normal Depth Street Capacity Analysis

Normal Depth Channel Analysis

Culvert Analysis

**Golden Valley Ranch
Technical Drainage Study**

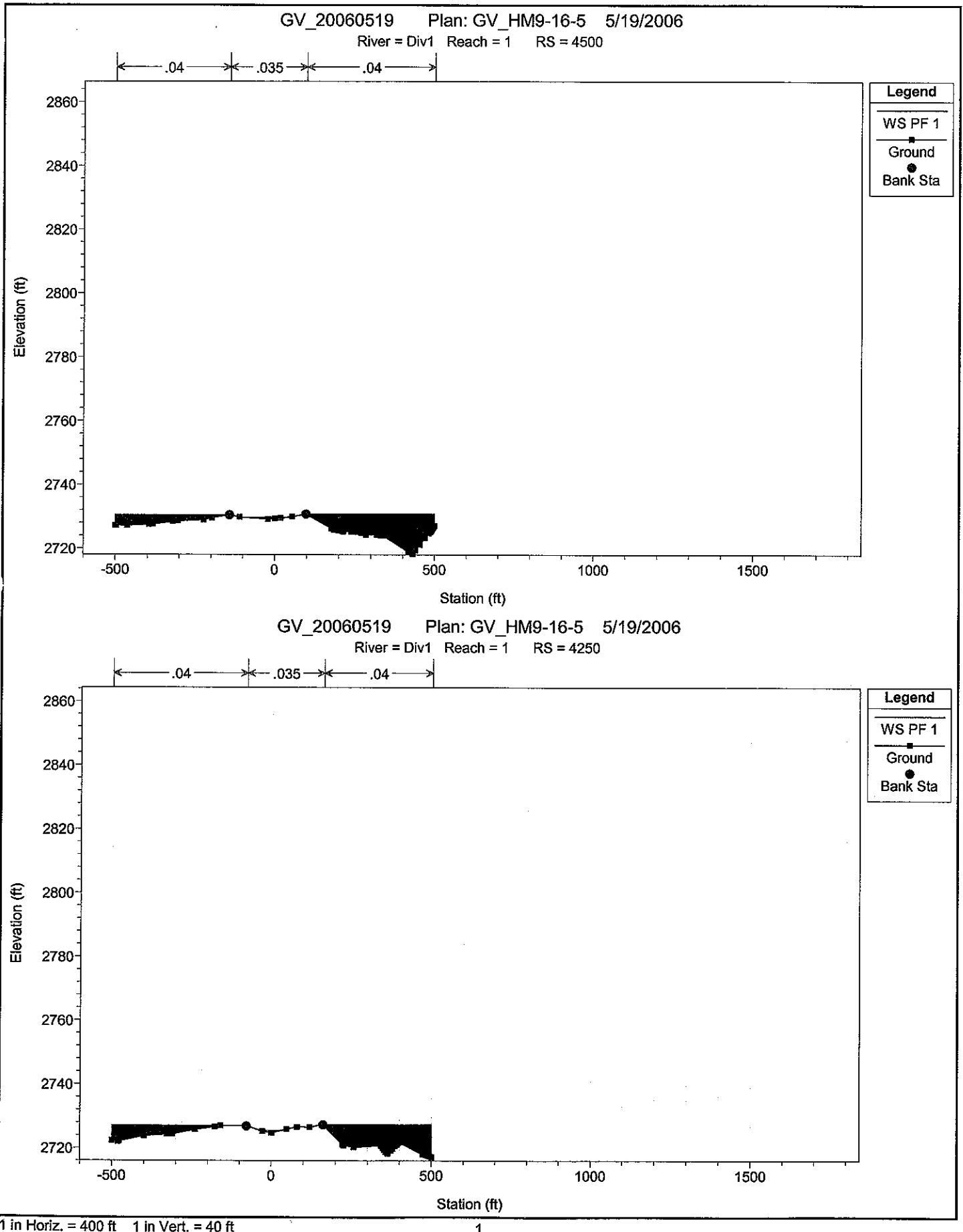
HEC-RAS Plan: 9-16-05 Profile: PF 1										
River	Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Vel Chnl	Flow Area	Top Width	Froude # Chl
				(cfs)	(ft)	(ft)	(ft/s)	(sq ft)	(ft)	
Holy Moses Wash	1	27750 PF 1		9904	2914.2	2920.35	11.8	1309.57	562.21	0.97
Holy Moses Wash	1	27500 PF 1		9904	2912.1	2916.8	6.49	1861.05	865.8	0.69
Holy Moses Wash	1	27250 PF 1		9904	2907.8	2913.55	9.92	998.33	325.81	1
Holy Moses Wash	1	27000 PF 1		9904	2903.6	2909.37	11.39	869.74	301.7	1.18
Holy Moses Wash	1	26750 PF 1		9904	2899.8	2904.01	12.59	801.26	311.19	1.31
Holy Moses Wash	1	26500 PF 1		9904	2895.7	2901.88	6.45	1649.02	663.25	0.66
Holy Moses Wash	1	26250 PF 1		9904	2892.1	2901.93	3.19	4005.92	925.09	0.23
Holy Moses Wash	2	26000 PF 1		5229	2884	2892.79	12.65	488.47	116.51	0.85
Holy Moses Wash	2	25750 PF 1		5229	2878.8	2881.36	22.25	235.04	158.23	3.22
Holy Moses Wash	2	25500 PF 1		5229	2877.5	2881.81	8.4	622.48	285.15	1
Holy Moses Wash	2	25250 PF 1		5229	2871.6	2876.69	10.02	521.71	291.52	1.32
Holy Moses Wash	2	25000 PF 1		5229	2871.4	2872.81	3.17	629.38	291.32	0.73
Holy Moses Wash	2	24750 PF 1		5229	2864.9	2873.21	2.41	2138.84	440.19	0.2
Holy Moses Wash	2	24500 PF 1		5229	2871.4	2870.87		468.06	122.08	0
Holy Moses Wash	2	24250 PF 1		5229	2868.4	2866.52		404.21	94.33	0
Holy Moses Wash	2	24000 PF 1		5229	2865.1	2862.23		382.83	89.93	0
Holy Moses Wash	2	23750 PF 1		5229	2860.8	2859.09		402.33	77.51	0
Holy Moses Wash	2	23500 PF 1		5229	2846.1	2855.01	13.29	391.02	92.17	1.19
Holy Moses Wash	2	23250 PF 1		5229	2851.3	2853.12	3.14	662.06	359.91	0.64
Holy Moses Wash	2	23000 PF 1		5229	2838.5	2843.61	19.05	274.46	148.42	2.47
Holy Moses Wash	2	22750 PF 1		5229	2836.3	2841.24	9.87	529.82	175.32	1
Holy Moses Wash	2	22500 PF 1		5229	2831.6	2835.48	3.03	2071.16	610.84	0.27
Holy Moses Wash	2	22250 PF 1		5229	2831.4	2833.82	5.45	626.91	300.08	0.97
Holy Moses Wash	2	22000 PF 1		5229	2825.4	2831.1	6.68	815.07	314.01	0.73
Holy Moses Wash	2	21750 PF 1		5229	2821.5	2827.61	10.83	482.99	134.58	1.01
Holy Moses Wash	2	21500 PF 1		5229	2814.2	2823.21	3.46	1510.93	333.35	0.29
Holy Moses Wash	2	21250 PF 1		5229	2810.85	2821.68	8.23	635.64	313.4	1.02
Holy Moses Wash	2	21000 PF 1		5229	2807.8	2813.99	14.12	370.29	146.09	1.56
Holy Moses Wash	2	20750 PF 1		5229	2795.7	2810.43	2.41	2172.65	212.07	0.13
Holy Moses Wash	2	20500 PF 1		5229	2798.7	2807.88	12.17	429.78	94.28	1
Holy Moses Wash	2	20250 PF 1		5229	2794.7	2803.92	13.92	375.74	81.78	1.14
Holy Moses Wash	2	20000 PF 1		5229	2792.2	2803.47	8.56	610.78	148.63	0.74
Holy Moses Wash	2	19750 PF 1		5229	2796.9	2801.21	8.66	604.1	260.54	1
Holy Moses Wash	2	19500 PF 1		5229	2794.4	2798.61	6.3	830.39	389.56	0.76
Holy Moses Wash	2	19250 PF 1		5229	2790.9	2795.41	8.72	599.8	257.31	1.01
Holy Moses Wash	2	19000 PF 1		5229	2786.2	2791.46	9.65	541.76	219.99	1.08
Holy Moses Wash	2	18750 PF 1		5229	2782.1	2787.06	9.51	550.01	278.7	1.19
Holy Moses Wash	2	18500 PF 1		5229	2775.7	2779.5	12.88	405.9	182.19	1.52
Holy Moses Wash	2	18250 PF 1		5229	2774	2778.98	5.65	926.2	486.93	0.72
Holy Moses Wash	2	18000 PF 1		5229	2772.4	2776	8.08	665.47	349.16	0.97
Holy Moses Wash	2	17500 PF 1		5229	2766	2771.27	3.08	1749.47	800.64	0.37
Holy Moses Wash	3	17250 PF 1		4141	2765.35	2769.57	7.36	563.02	336.06	1
Holy Moses Wash	3	17000 PF 1		4141	2755.4	2759.83	16.48	251.25	99.45	1.83
Holy Moses Wash	3	16750 PF 1		4141	2751.9	2758.67	5.95	696.16	624.32	0.99
Holy Moses Wash	3	16500 PF 1		4141	2747.5	2753.98	4.86	852.13	549.06	0.69
Holy Moses Wash	3	16250 PF 1		4141	2745.73	2750.9	7.2	574.87	366.21	1.01
Holy Moses Wash	3	16000 PF 1		4141	2742.5	2746.66	7.24	571.8	398.86	1.07
Holy Moses Wash	3	15750 PF 1		4141	2735.46	2743.28	6.43	644.44	360.81	0.85
Holy Moses Wash	3	15500 PF 1		4141	2734	2739.84	7.29	568.15	356.36	1.02
Holy Moses Wash	3	15250 PF 1		4141	2729.43	2734.11	10.19	406.27	208.86	1.29
Holy Moses Wash	3	15000 PF 1		4141	2727.5	2732.21	5.49	753.78	299.61	0.61
Holy Moses Wash	3	14750 PF 1		4141	2723.31	2729.1	6.24	663.27	290.24	0.73
Holy Moses Wash	3	14500 PF 1		4141	2720.3	2726.14	7.88	525.46	290.59	1.03
Holy Moses Wash	3	14250 PF 1		4141	2716.1	2721.96	6.69	638.17	257.05	0.7
Holy Moses Wash	4	14000 PF 1		4030	2713.9	2719.19	8.74	463.45	207.25	1.01
Holy Moses Wash	4	13750 PF 1		4030	2710.9	2715.63	9.09	443.55	182.2	1.03

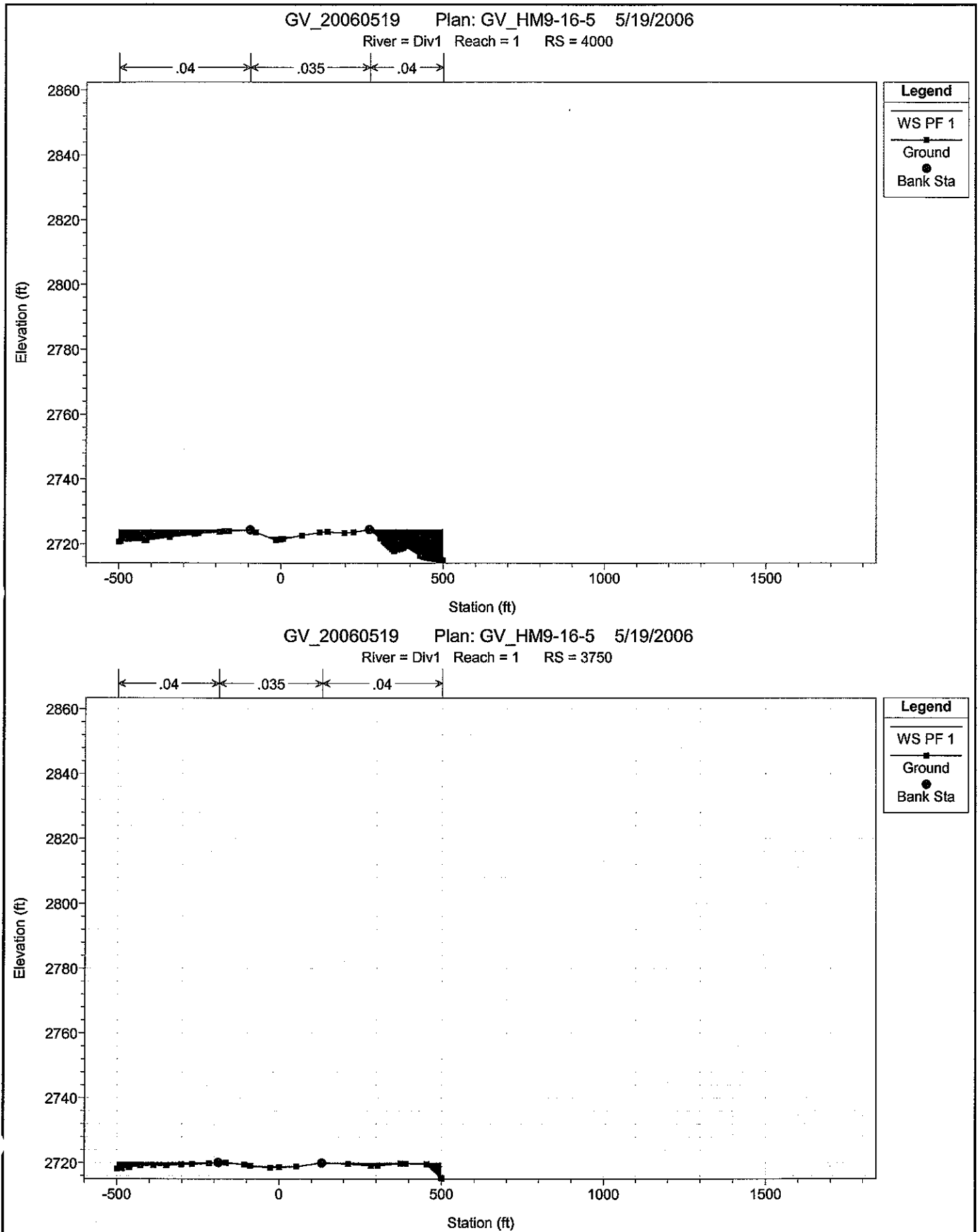
**Golden Valley Ranch
Technical Drainage Study**

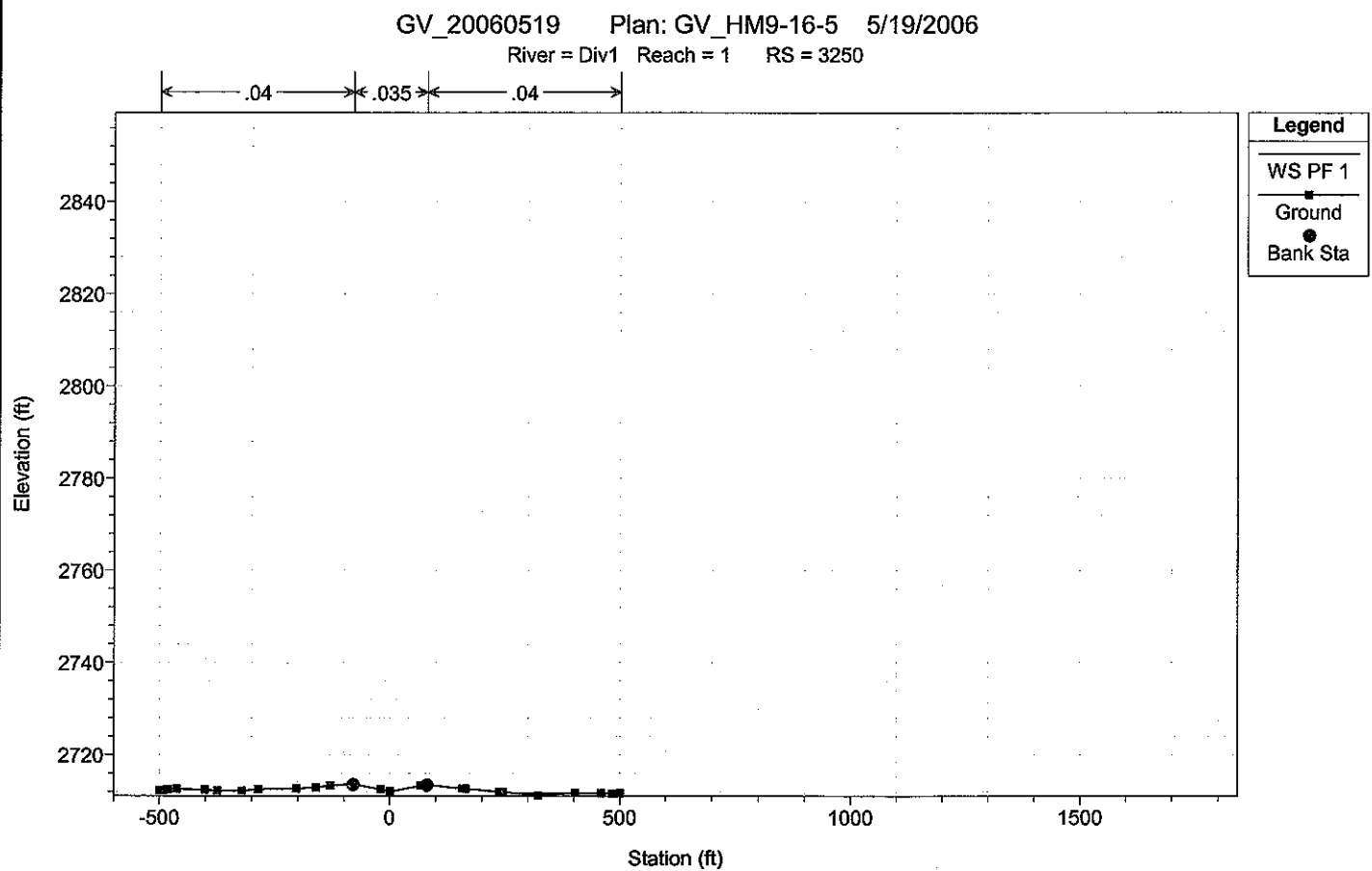
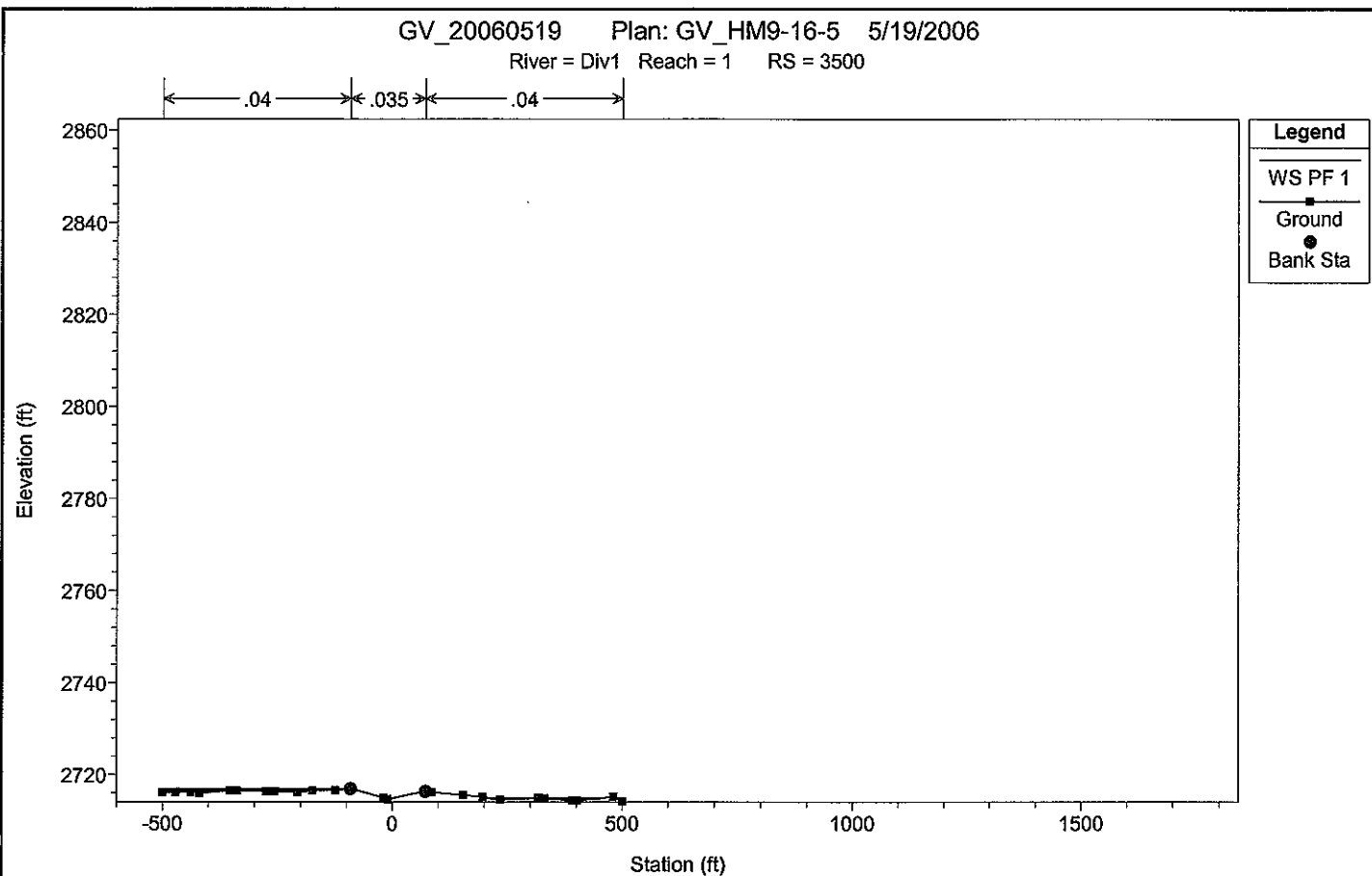
River	Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Vel Chnl	Flow Area	Top Width	Froude # Chl
Holy Moses Wash	4	13500	PF 1	4030	2707.5	2712.56	8.43	478.2	203.41	0.97
Holy Moses Wash	4	13250	PF 1	4030	2703.5	2709.41	8.38	481.17	204.76	0.96
Holy Moses Wash	4	13000	PF 1	4030	2700.2	2706.59	7.63	527.87	235.9	0.9
Holy Moses Wash	4	12750	PF 1	4030	2699.6	2703.28	8.72	461.94	191.09	0.99
Holy Moses Wash	4	12500	PF 1	4030	2696	2699.92	8.59	469.15	209.75	1.01
Holy Moses Wash	4	12250	PF 1	4030	2691.9	2696.12	7.53	534.85	189.03	0.79
Holy Moses Wash	4	12000	PF 1	4030	2689.1	2693.15	9.24	436.25	164.8	1
Holy Moses Wash	4	11750	PF 1	4030	2686	2689.15	9.77	437.51	216.9	1.19
Holy Moses Wash	4	11500	PF 1	4030	2682.8	2685.85	8.09	525.29	248.46	0.99
Holy Moses Wash	4	11250	PF 1	4030	2678.5	2683.52	7.08	670.06	341.76	0.77
Holy Moses Wash	4	11000	PF 1	4030	2674.6	2680.09	10.12	398.41	124.61	1
Holy Moses Wash	4	10750	PF 1	4030	2672.5	2677.09	9.29	433.59	164.22	1.01
Holy Moses Wash	4	10500	PF 1	4030	2669.4	2673.51	9.39	429.37	179.86	1.07
Holy Moses Wash	4	10250	PF 1	4030	2666.2	2669.42	8.91	452.09	233.68	1.13
Div3	1	3750	PF 1	4375	2884.1	2902	0.49	11590.54	1356.17	0.02
Div3	1	3500	PF 1	4375	2898.5	2901.81	4.2	1453.74	1102.36	0.51
Div3	1	3250	PF 1	4375	2893.5	2899.13	8.59	509.31	223.6	1
Div3	1	3000	PF 1	4375	2890	2894.78	5.72	765.11	226.7	0.55
Div3	1	2750	PF 1	4375	2888.3	2892.34	9.19	475.9	181.7	1
Div3	1	2500	PF 1	4375	2884.9	2887.98	9.5	460.65	259.08	1.26
Div3	1	2250	PF 1	4375	2879.6	2884.12	7.45	587.24	195.99	0.76
Div3	1	2000	PF 1	4375	2876.3	2881.46	8.34	524.48	243.39	1
Div3	1	1750	PF 1	4375	2873	2877	10.68	479.63	249.87	1.19
Div3	1	1500	PF 1	4375	2867.7	2874.51	9.17	815.58	435.48	0.75
Div3	1	1250	PF 1	4375	2866.5	2872.72	6.45	692.33	383.18	0.79
Div3	1	1000	PF 1	4375	2864.4	2869.51	8.16	535.88	259.24	1
Div3	1	750	PF 1	4375	2860.5	2865.57	10.16	506.96	273.15	1.08
Div3	1	500	PF 1	4375	2855.4	2860.8	11.04	402.68	167.02	1.18
Div3	1	250	PF 1	4375	2851.5	2855.7	11.38	390.39	188.61	1.29
Div2	1	18500	PF 1	1088	2765.24	2767.46	4.78	227.7	152.41	0.69
Div2	1	18250	PF 1	1088	2762	2765.04	6.23	174.64	97.81	0.82
Div2	1	18000	PF 1	1088	2759.14	2761.75	7	155.38	104.3	1.01
Div2	1	17750	PF 1	1088	2753.84	2756.89	8.67	125.56	71.02	1.15
Div2	1	17500	PF 1	1088	2748.74	2752.11	8.36	130.12	76.04	1.13
Div2	1	17250	PF 1	1088	2744.77	2750.37	4.91	221.7	89.32	0.55
Div2	1	17000	PF 1	1088	2743.48	2747.88	8.34	130.5	60.85	1
Div2	1	16750	PF 1	1088	2741.11	2744.35	7.27	149.67	93.15	1.01
Div2	1	16500	PF 1	1088	2737.14	2740.39	7.47	145.6	87.02	1.02
Div2	1	16250	PF 1	1088	2733.96	2732.17		139.57	266.26	0
Div2	1	16000	PF 1	1088	2728.94	2726.01		220.19	300.93	0
Div2	1	15750	PF 1	1088	2726.81	2724.08		379.5	195.65	0
Div2	1	15500	PF 1	1088	2723.77	2722.18		184.49	175.53	0
Div1	1	4500	PF 1	111	2729.2	2729.83	2.38	46.69	142.85	0.73
Div1	1	4250	PF 1	111	2724.9	2725.7	3.39	32.78	74.11	0.9
Div1	1	4000	PF 1	111	2721.1	2722.1	2.85	38.91	78.84	0.72
Div1	1	3750	PF 1	111	2718.5	2719.02	2	46.46	144.89	0.69
Div1	1	3500	PF 1	111	2714.7	2714.94	0.91	75.89	266.95	0.46
Div1	1	3250	PF 1	111	2712	2711.79		48.9	223.12	0
Div1	1	3000	PF 1	111	2709.3	2707.98		66.5	233.29	0
Div1	1	2750	PF 1	111	2706.6	2703.4		33.52	101.23	0
Div1	1	2500	PF 1	111	2703.1	2699.11		69.38	117.19	0
Div1	1	2250	PF 1	111	2697.8	2697.03		39.6	129.21	0
Div1	1	2000	PF 1	111	2692	2689.65		29.71	69.72	0
Div1	1	1750	PF 1	111	2689.5	2687.77		54.81	62.29	0
Div1	1	1500	PF 1	111	2685.5	2685.7	1.33	27.19	54.5	0.78
Div1	1	1250	PF 1	111	2681.9	2680.26		44.06	51.94	0
Div1	1	1000	PF 1	111	2677.6	2678.59	2.2	50.13	99.95	0.58
Div1	1	750	PF 1	111	2677	2674.91		25.65	44.94	0

**Golden Valley Ranch
Technical Drainage Study**

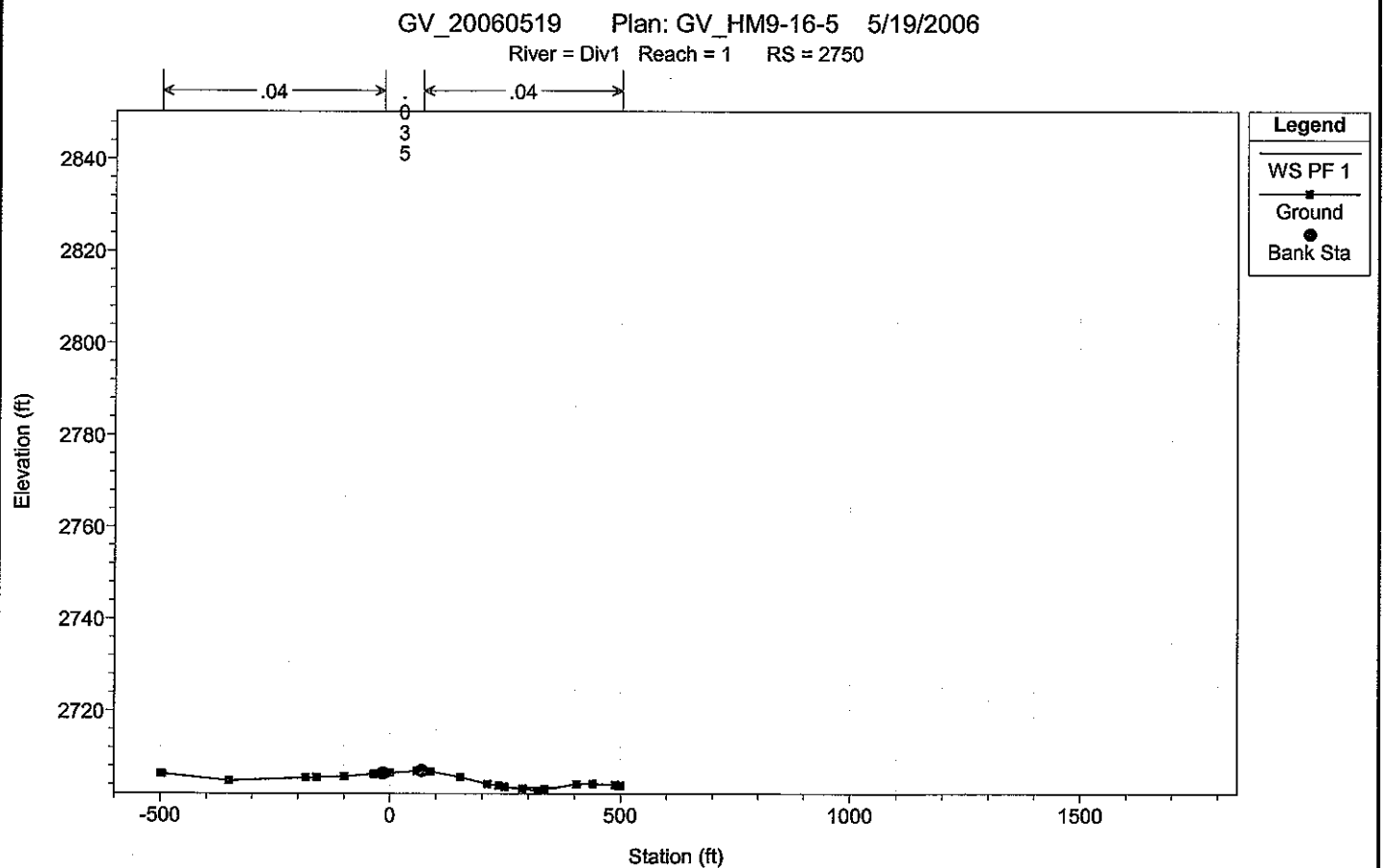
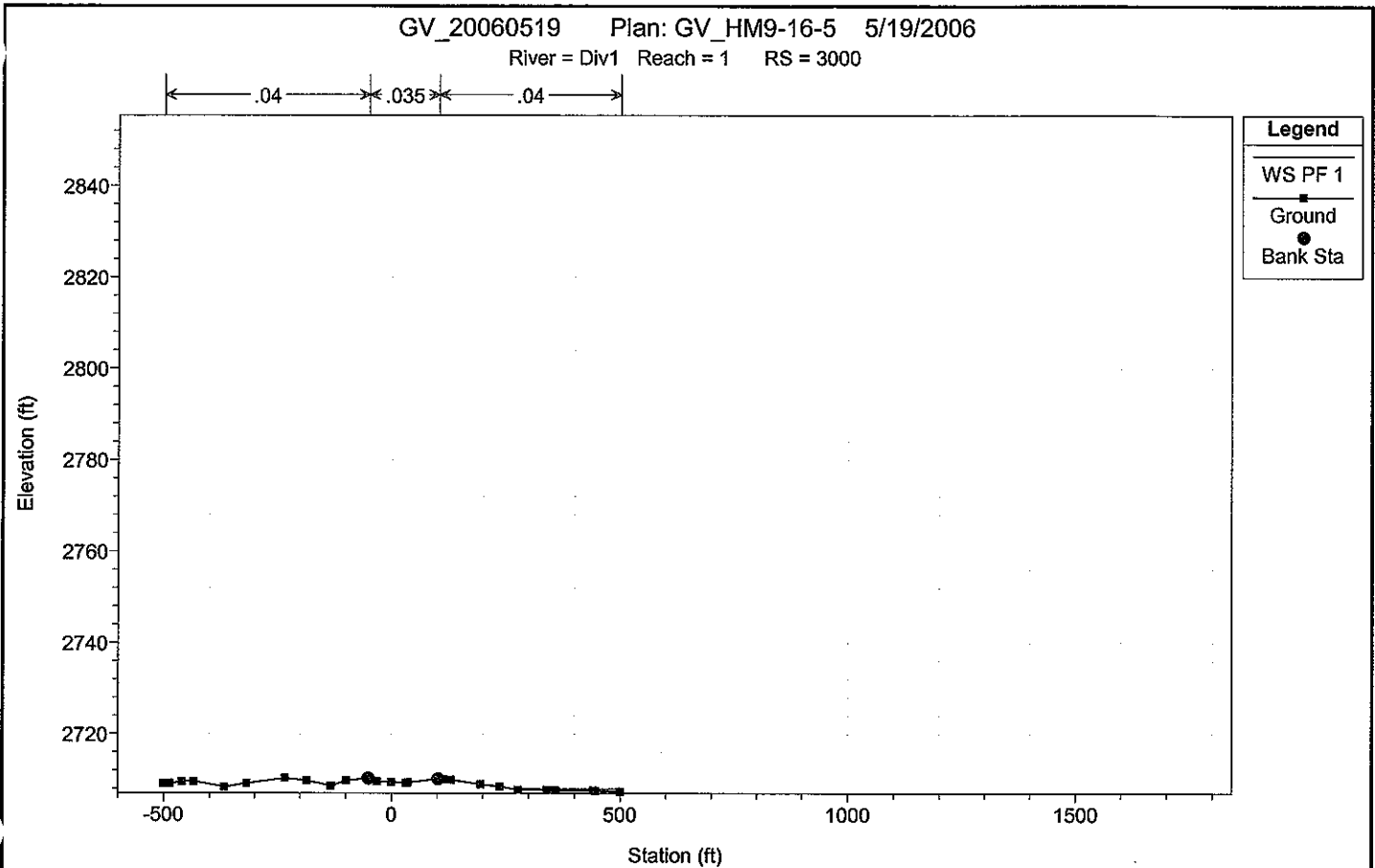
River	Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Vel Chnl	Flow Area	Top Width	Froude # Chl
Div1	1	500	PF 1	111	2671.8	2671.07		53.58	40.33	0
Div1	1	250	PF 1	111	2669.4	2669.59	1.31	33.16	93.51	0.8



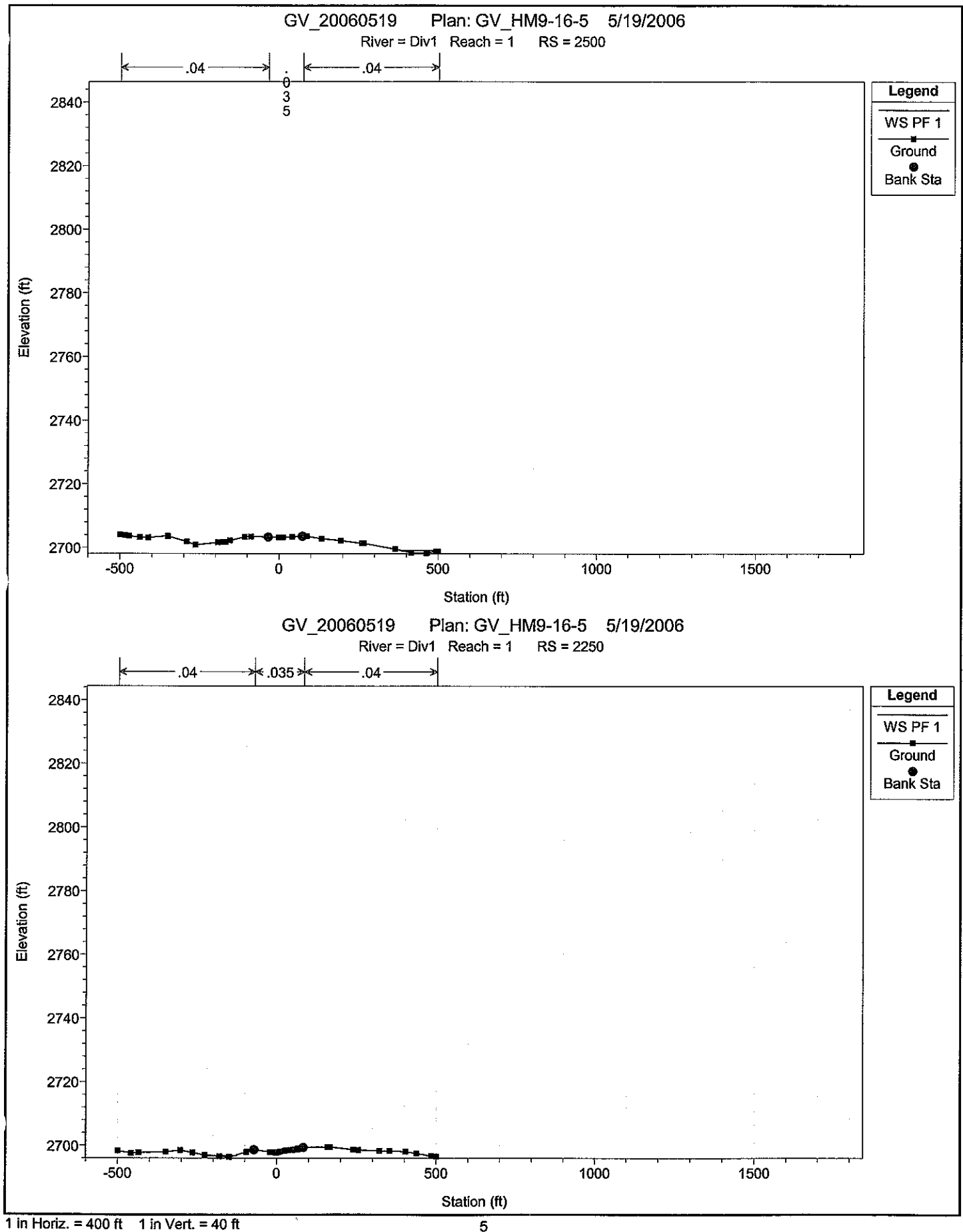


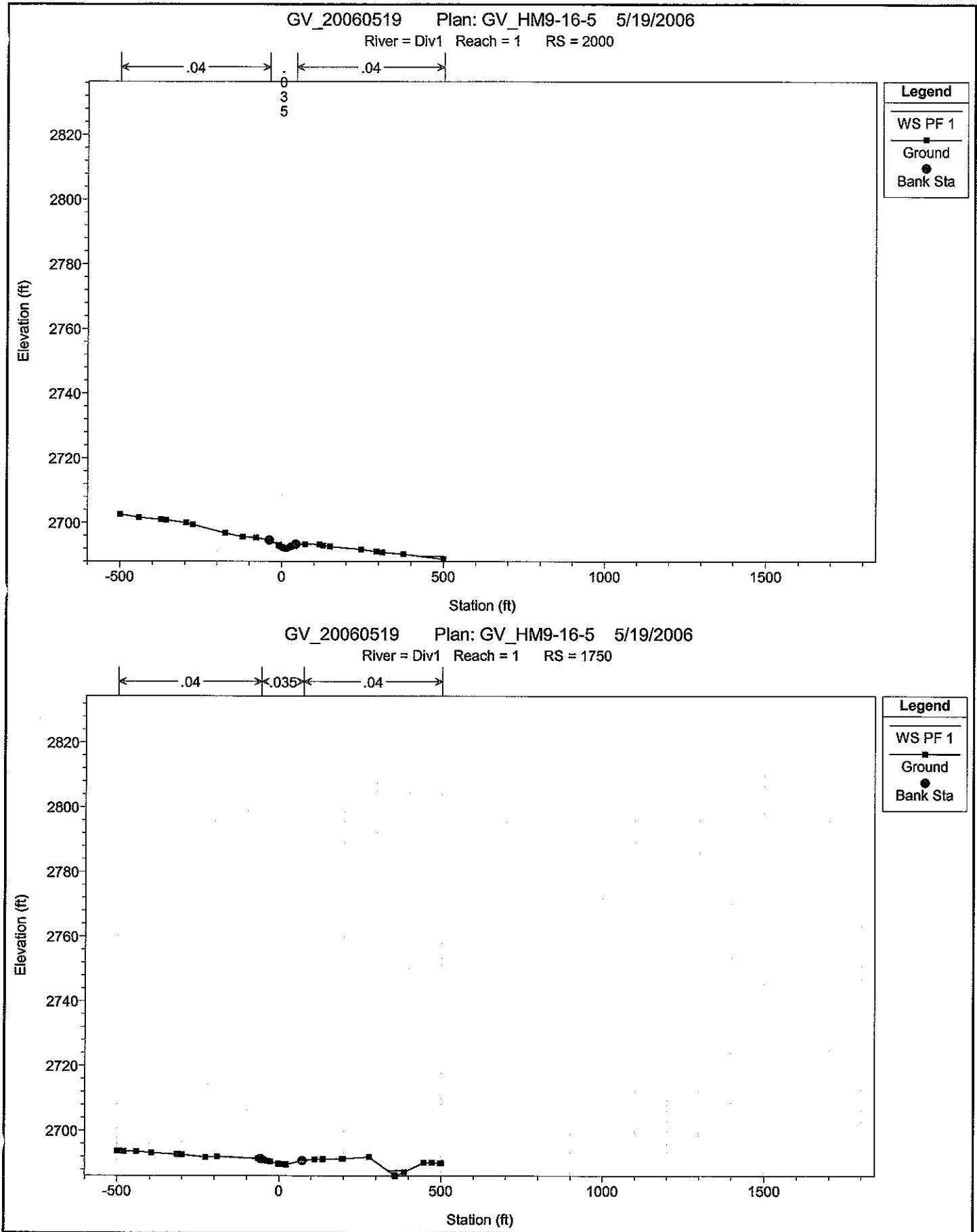


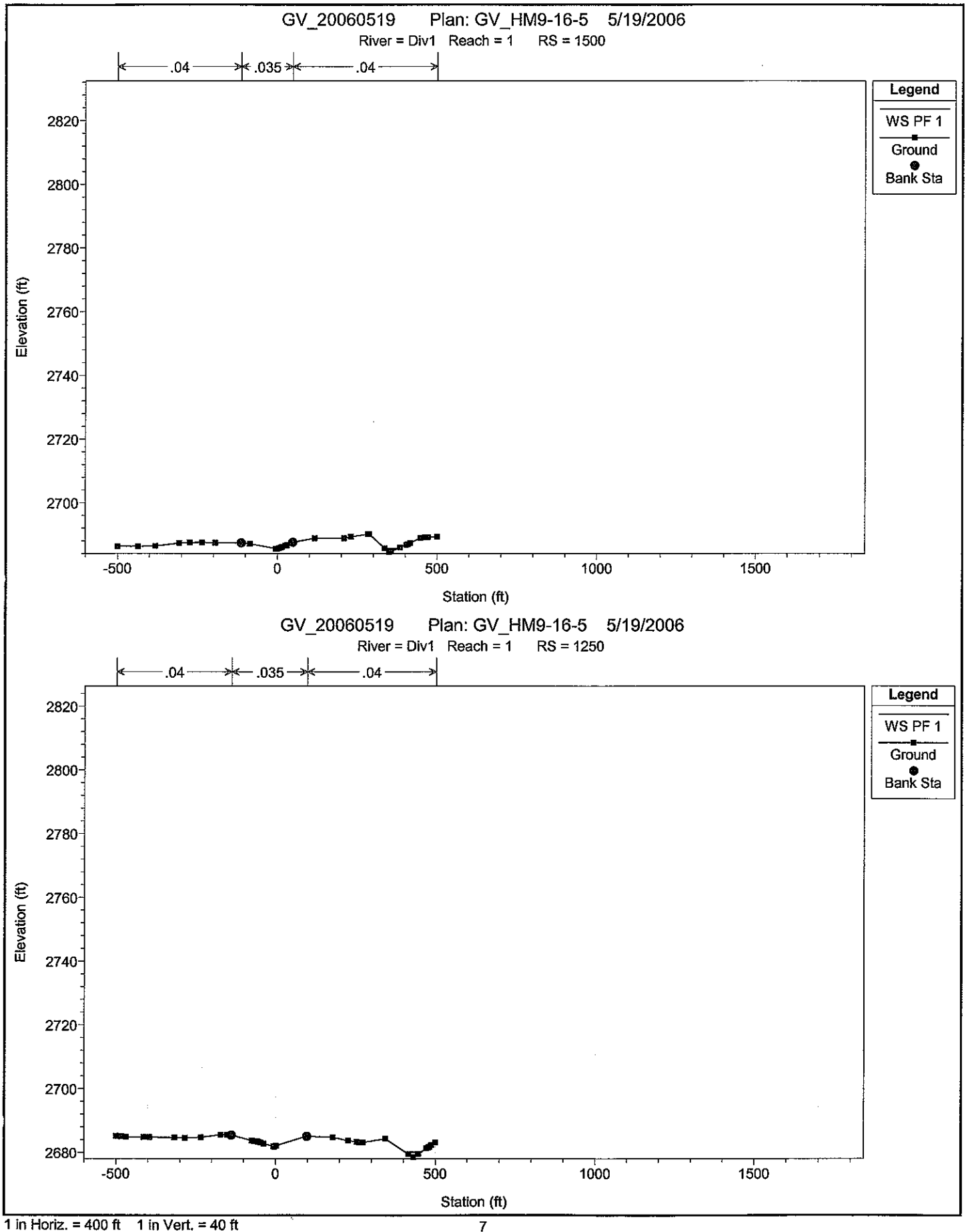
1 in Horiz. = 400 ft 1 in Vert. = 40 ft

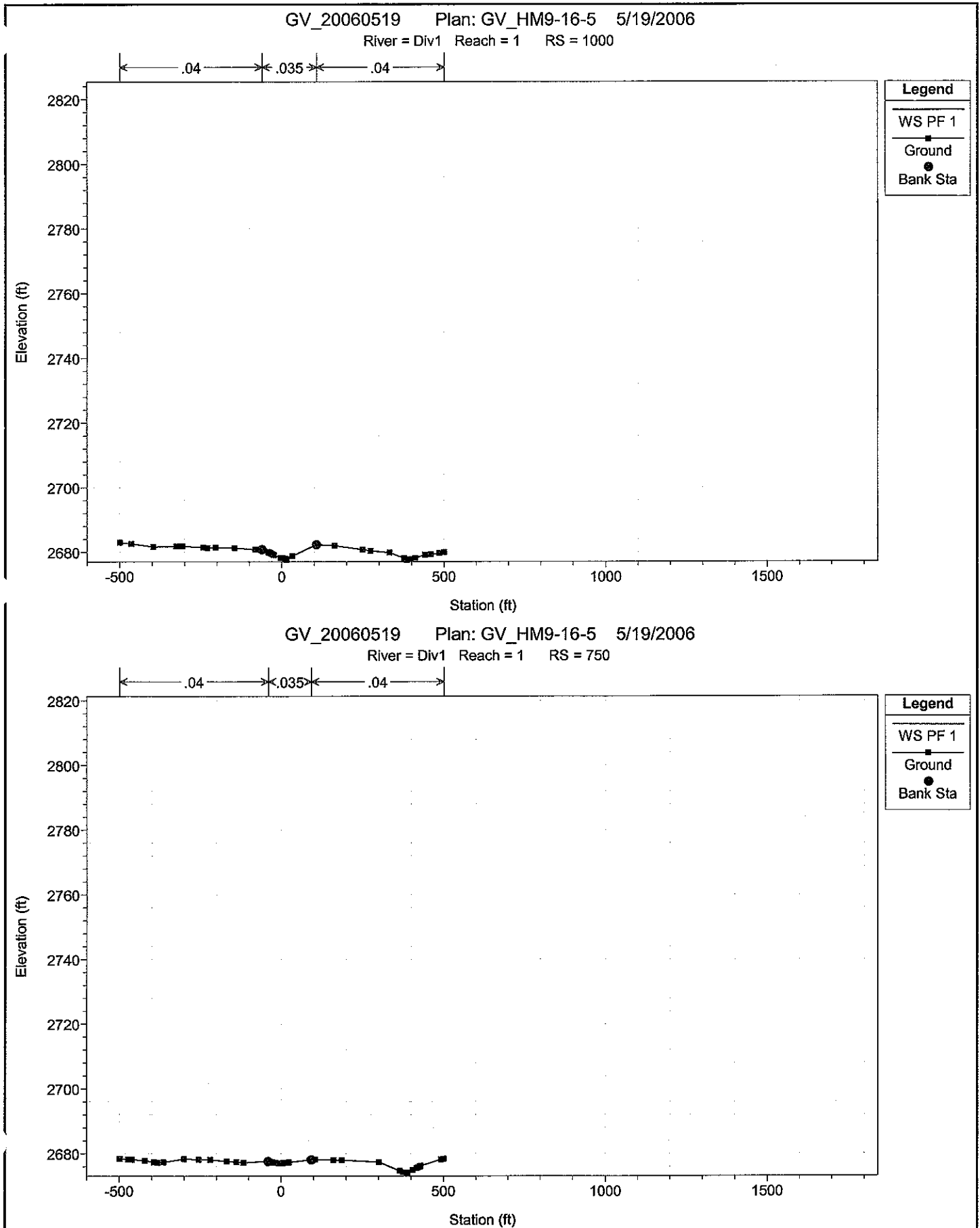


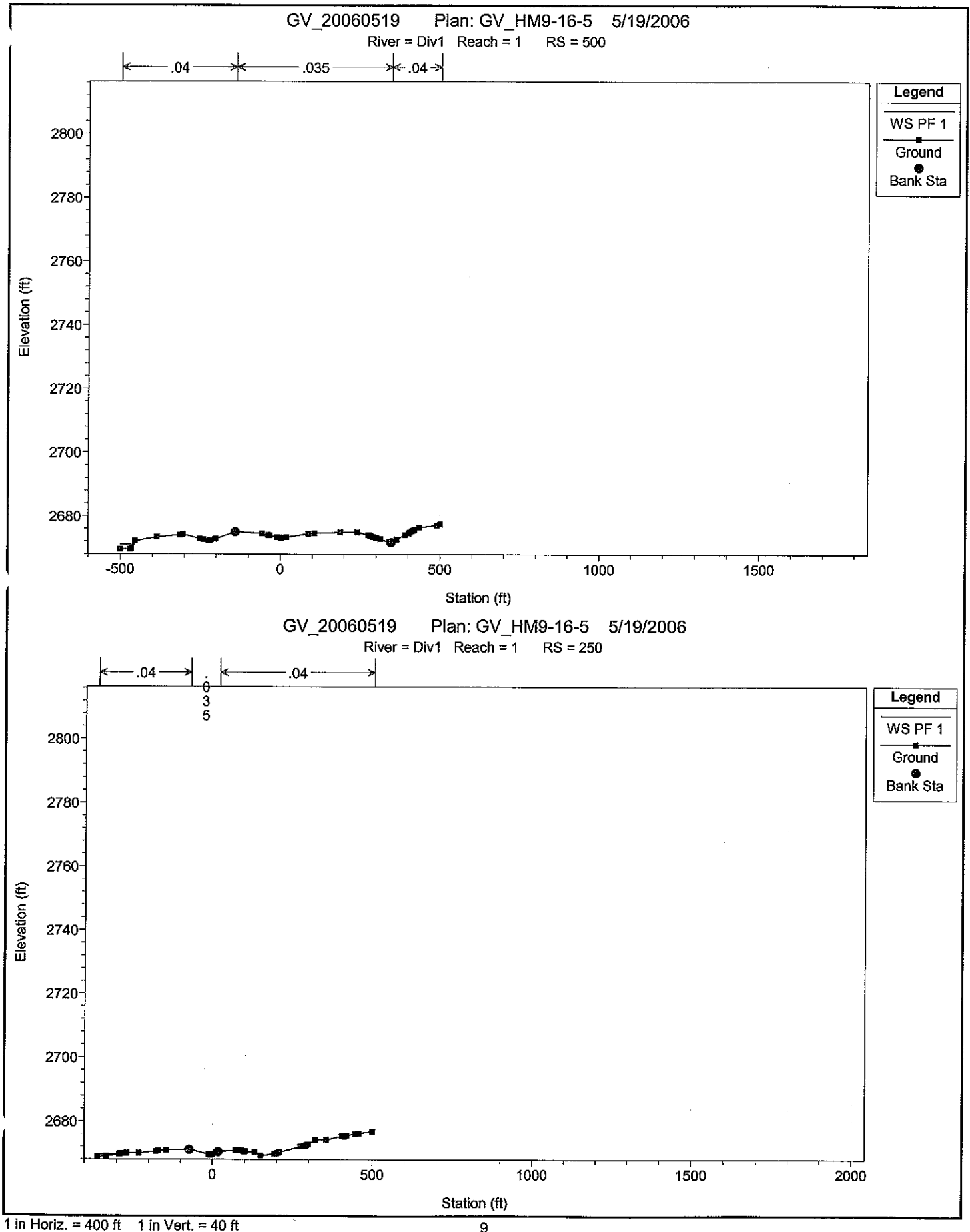
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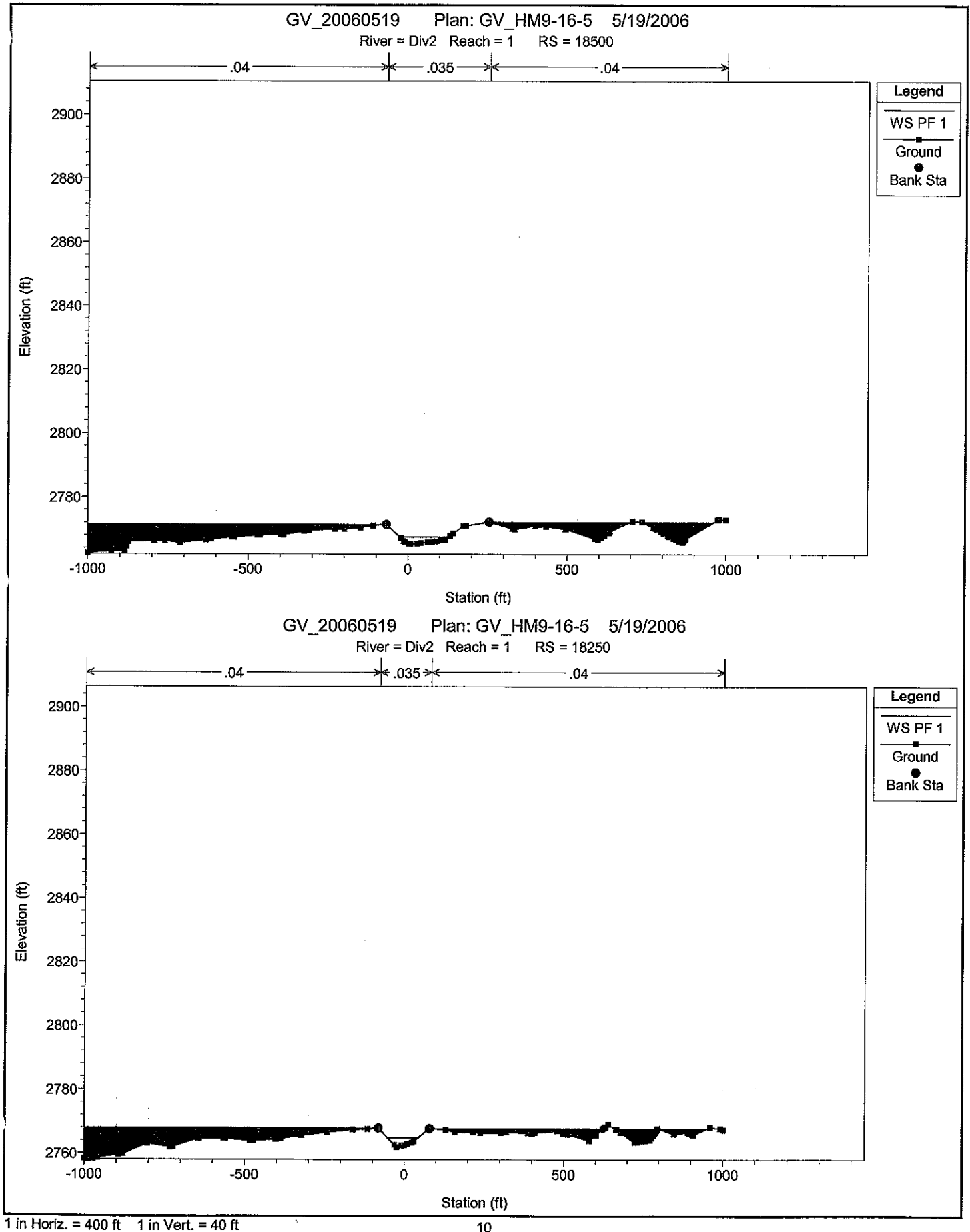


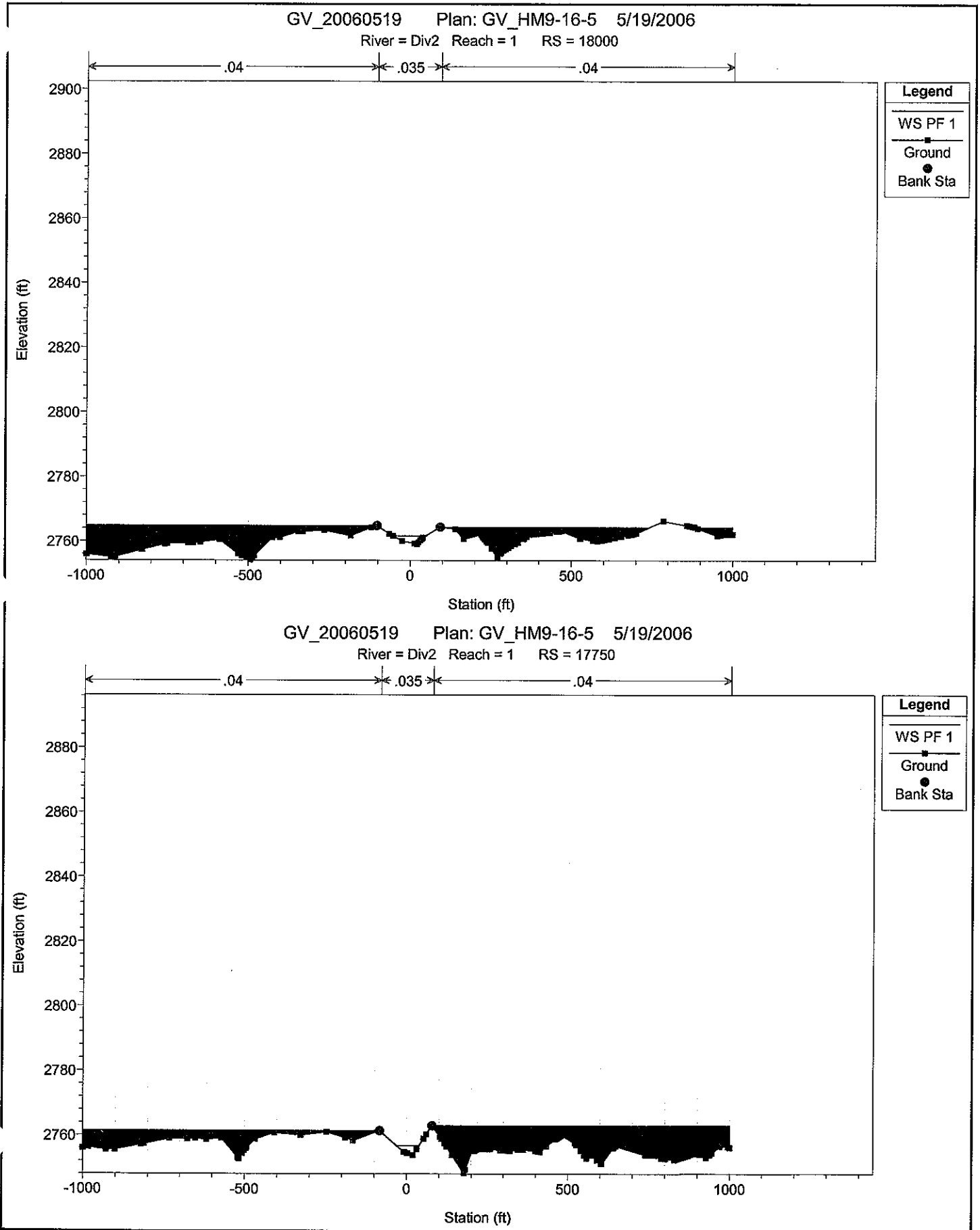


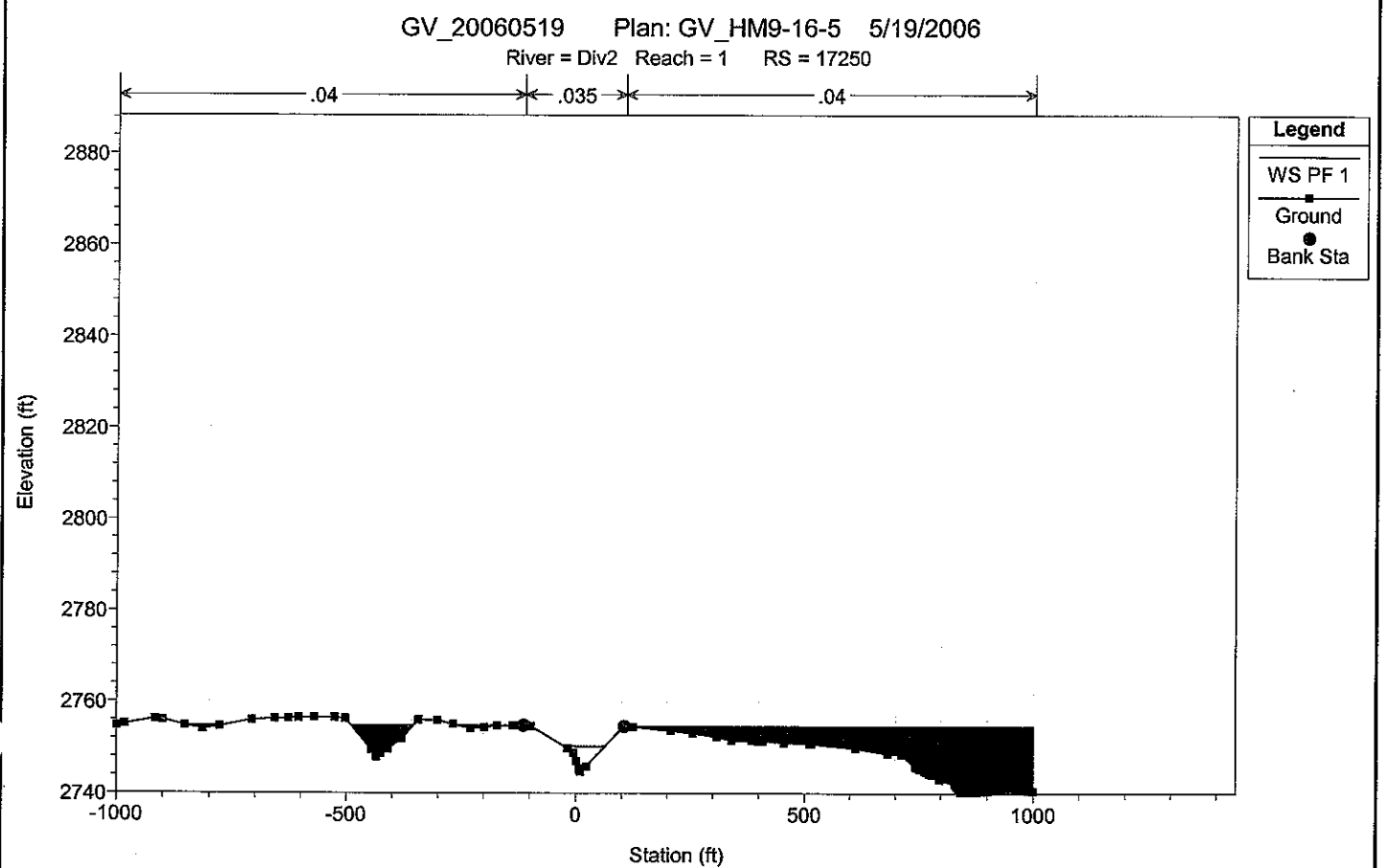
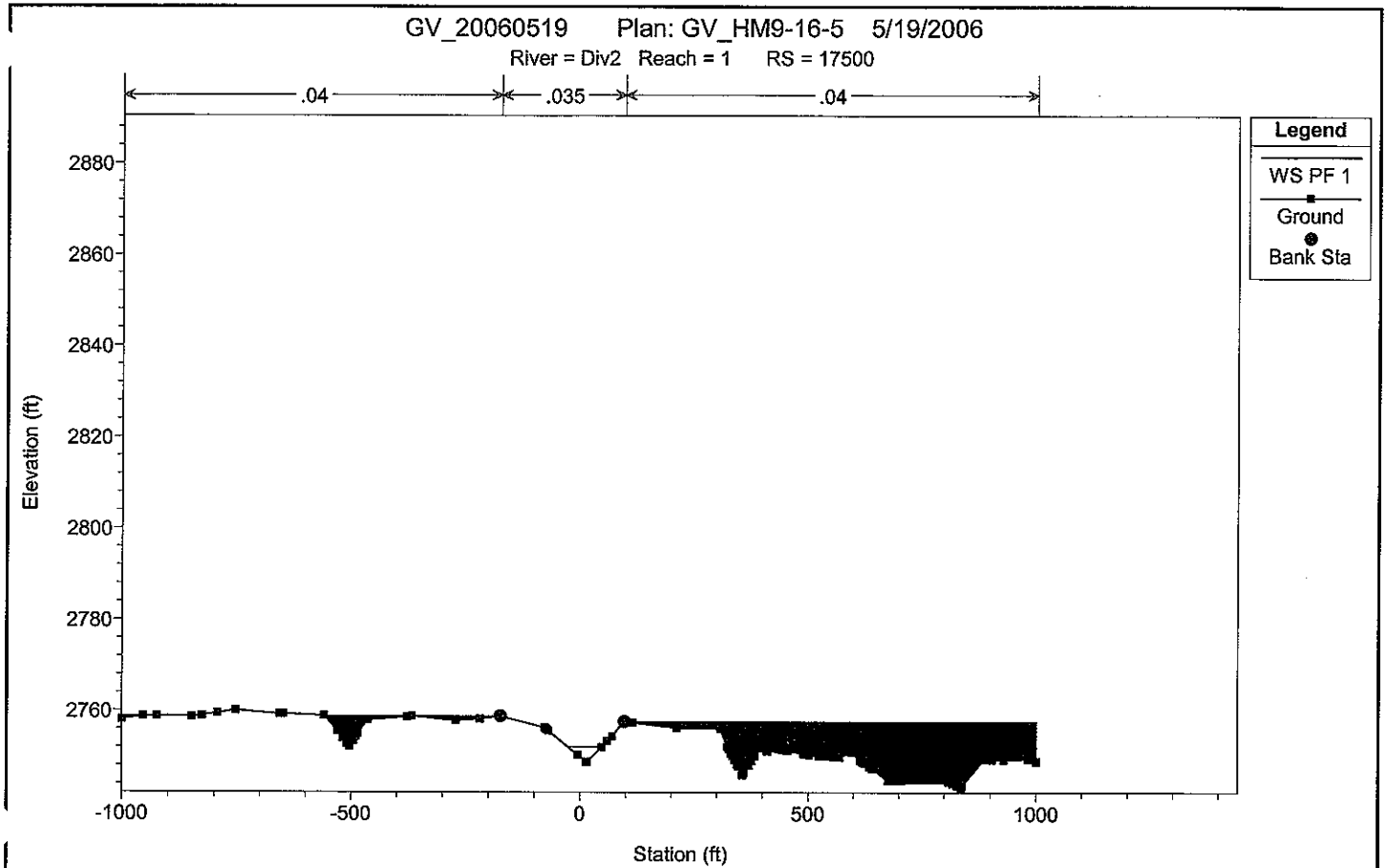




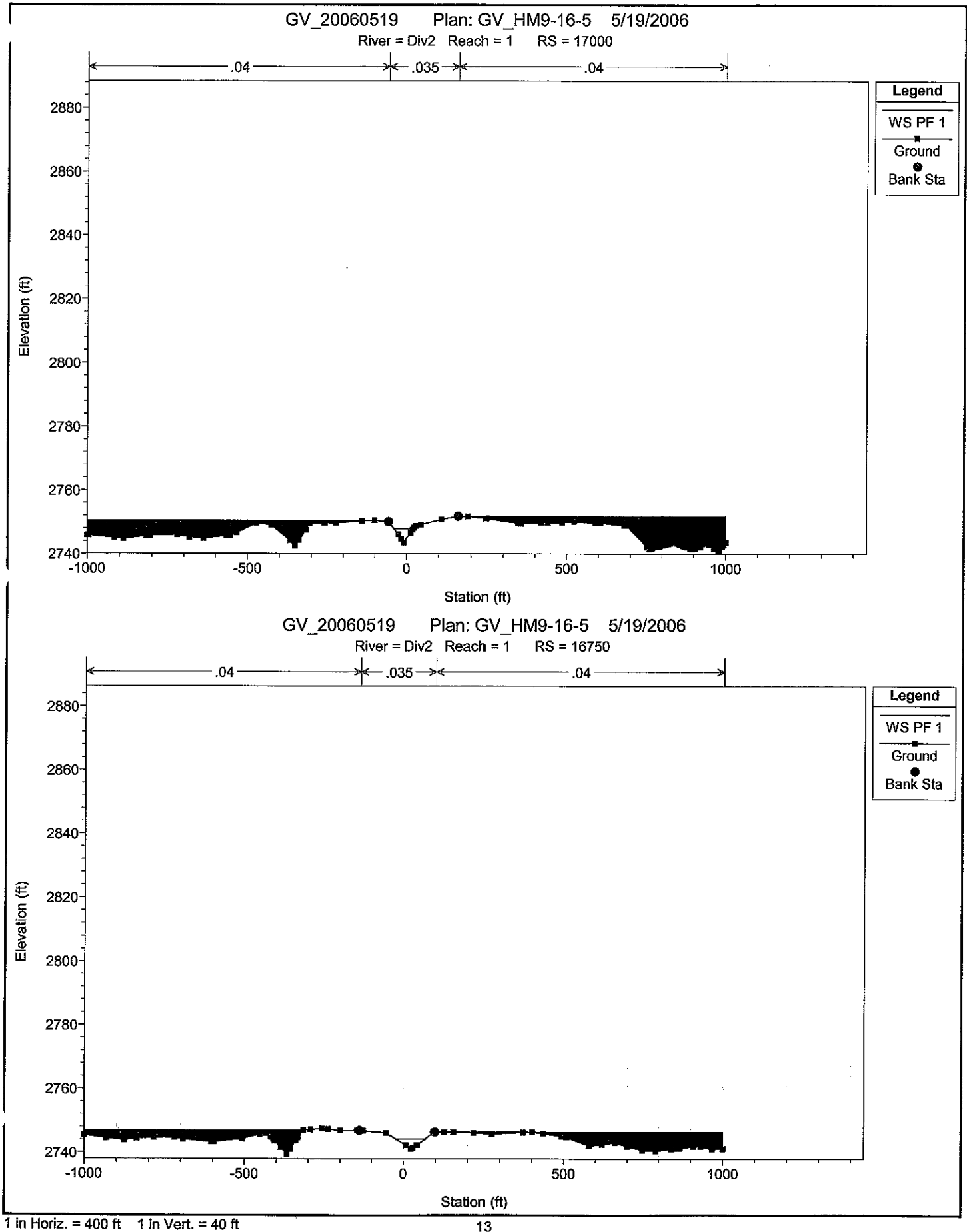


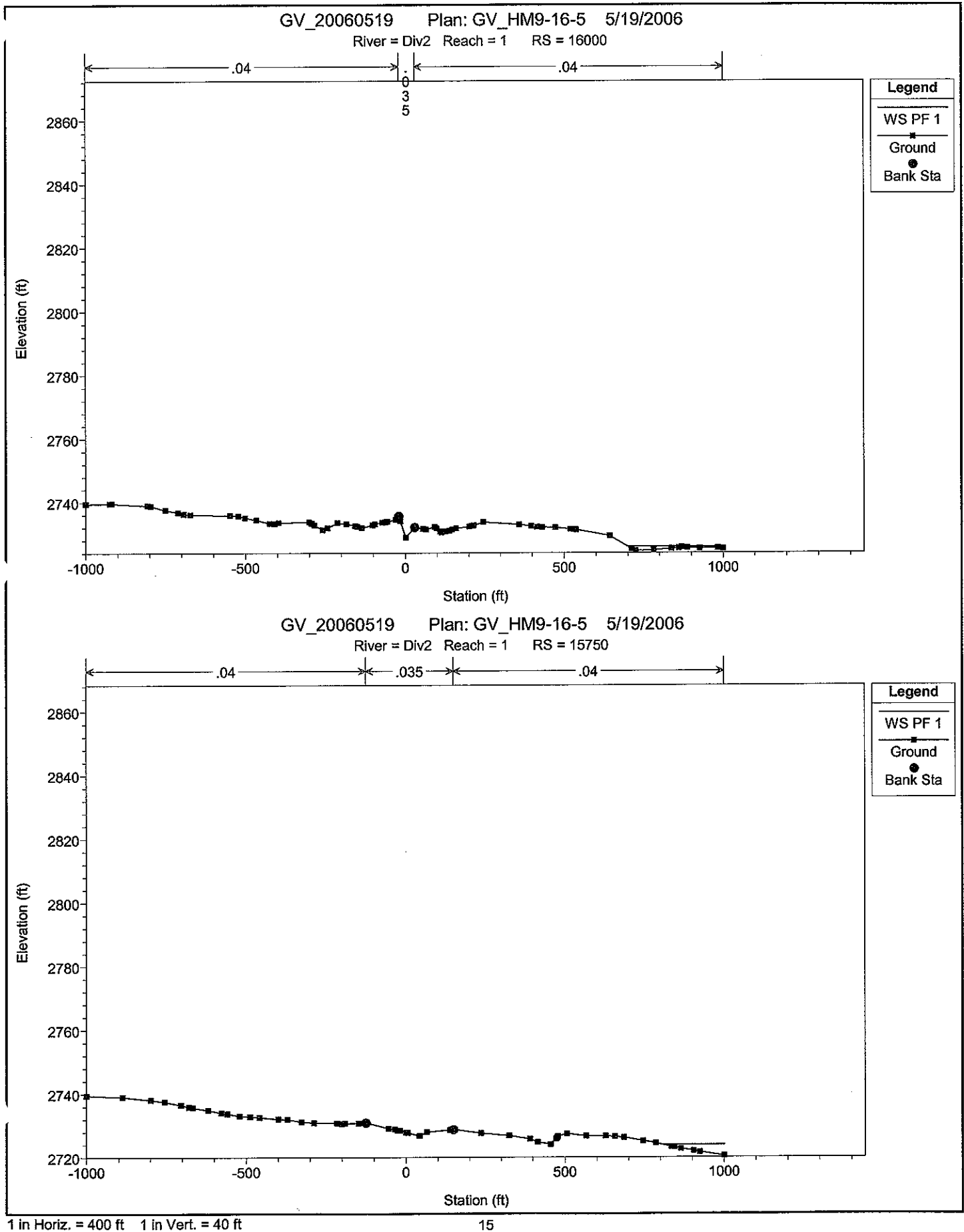


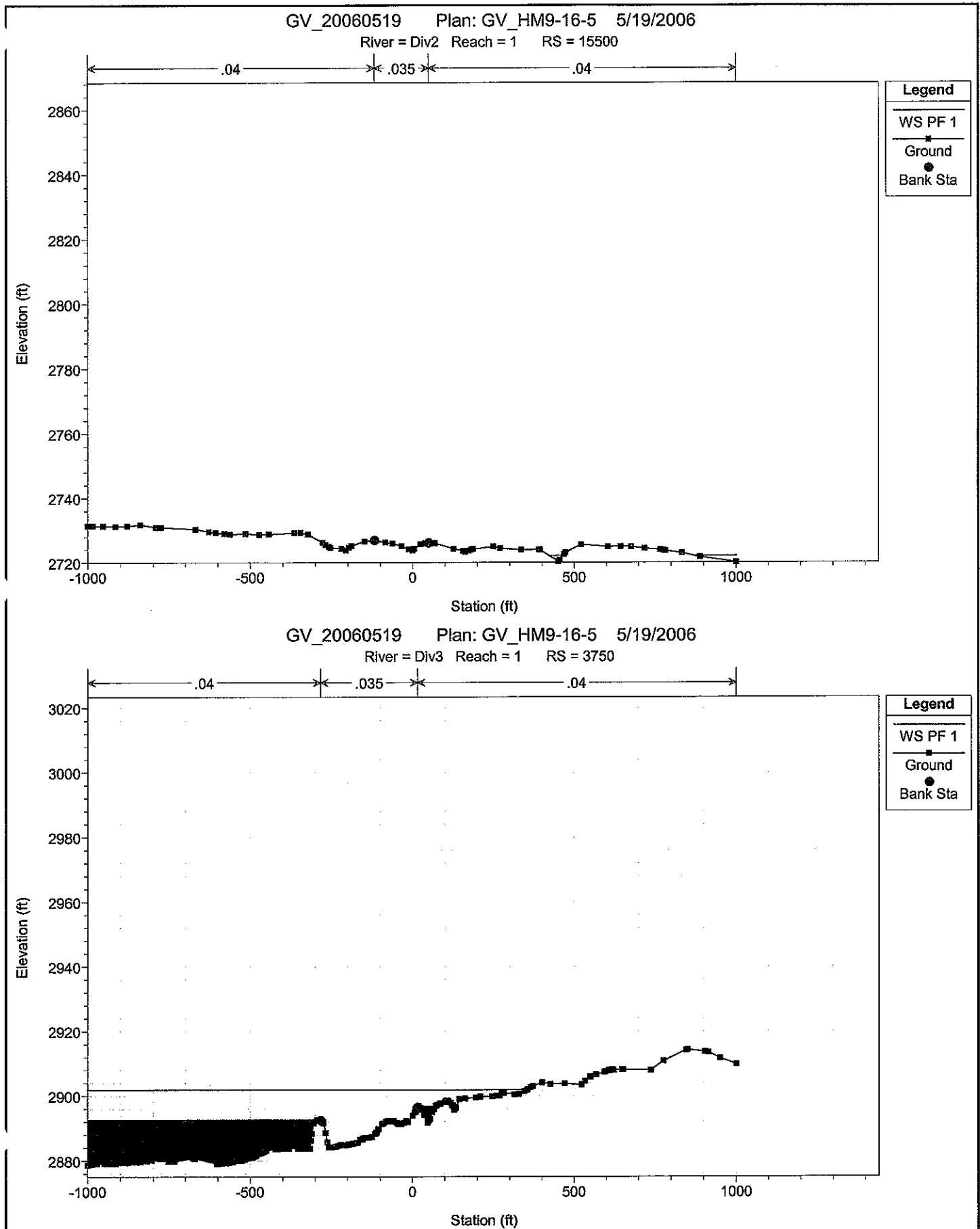


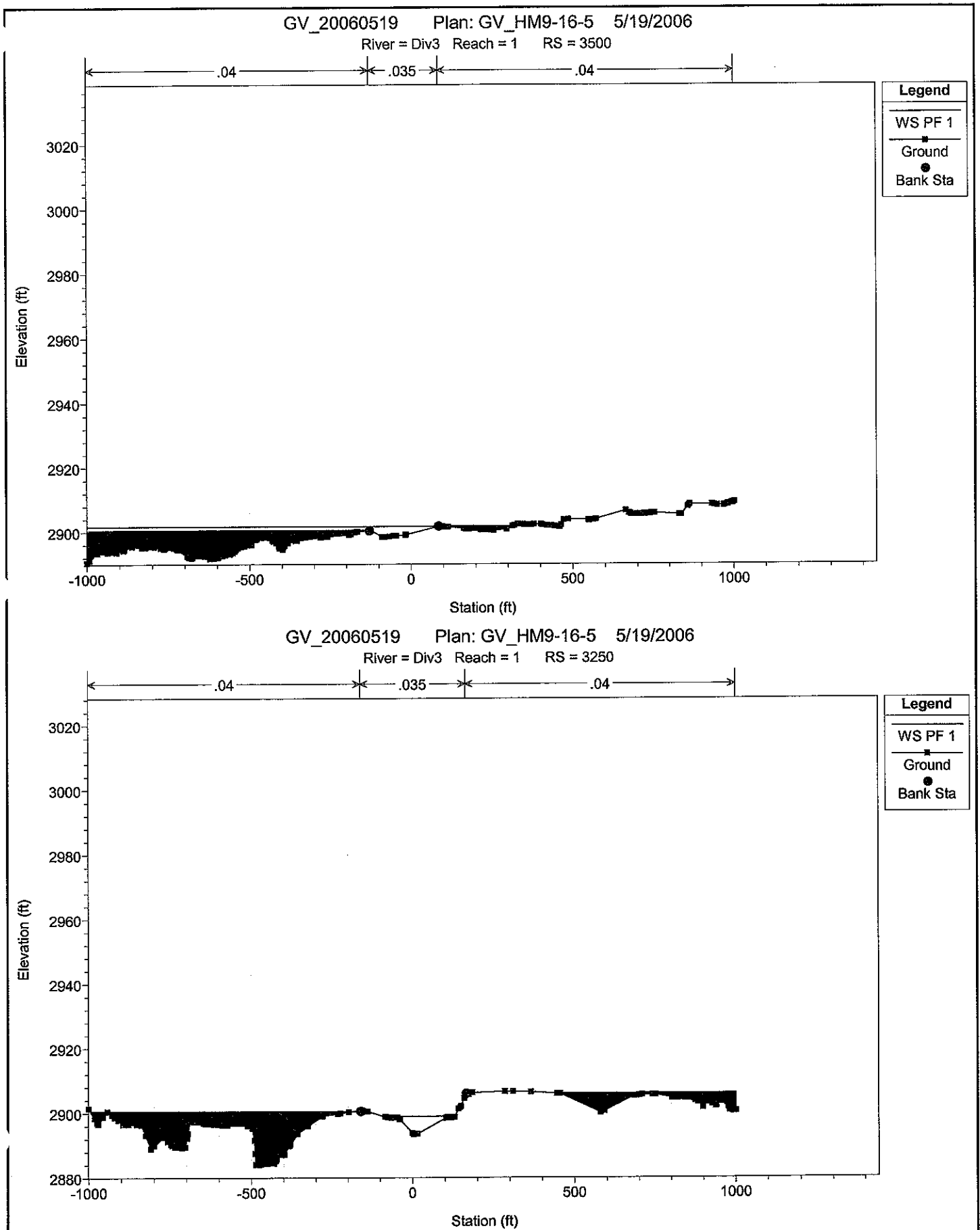


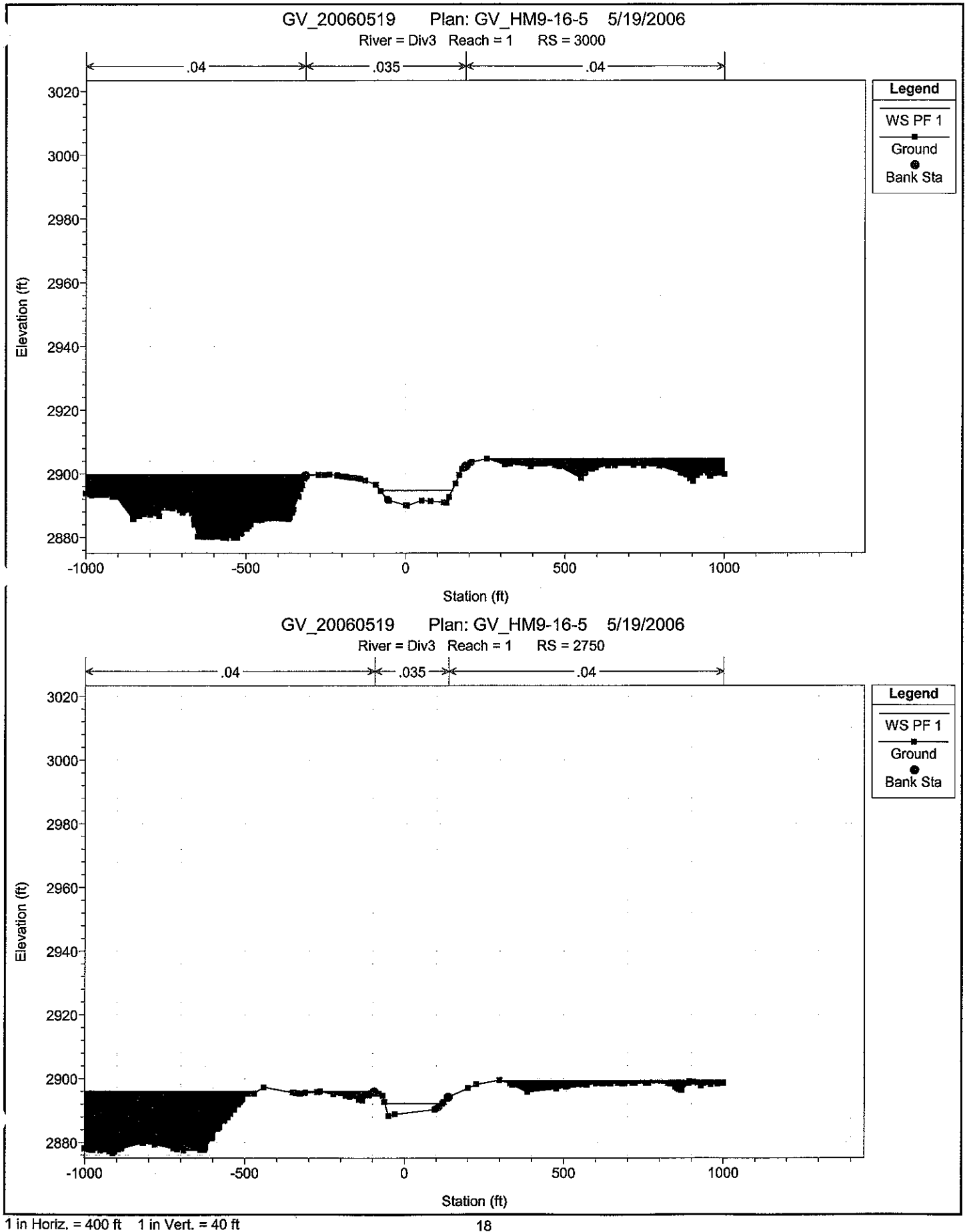
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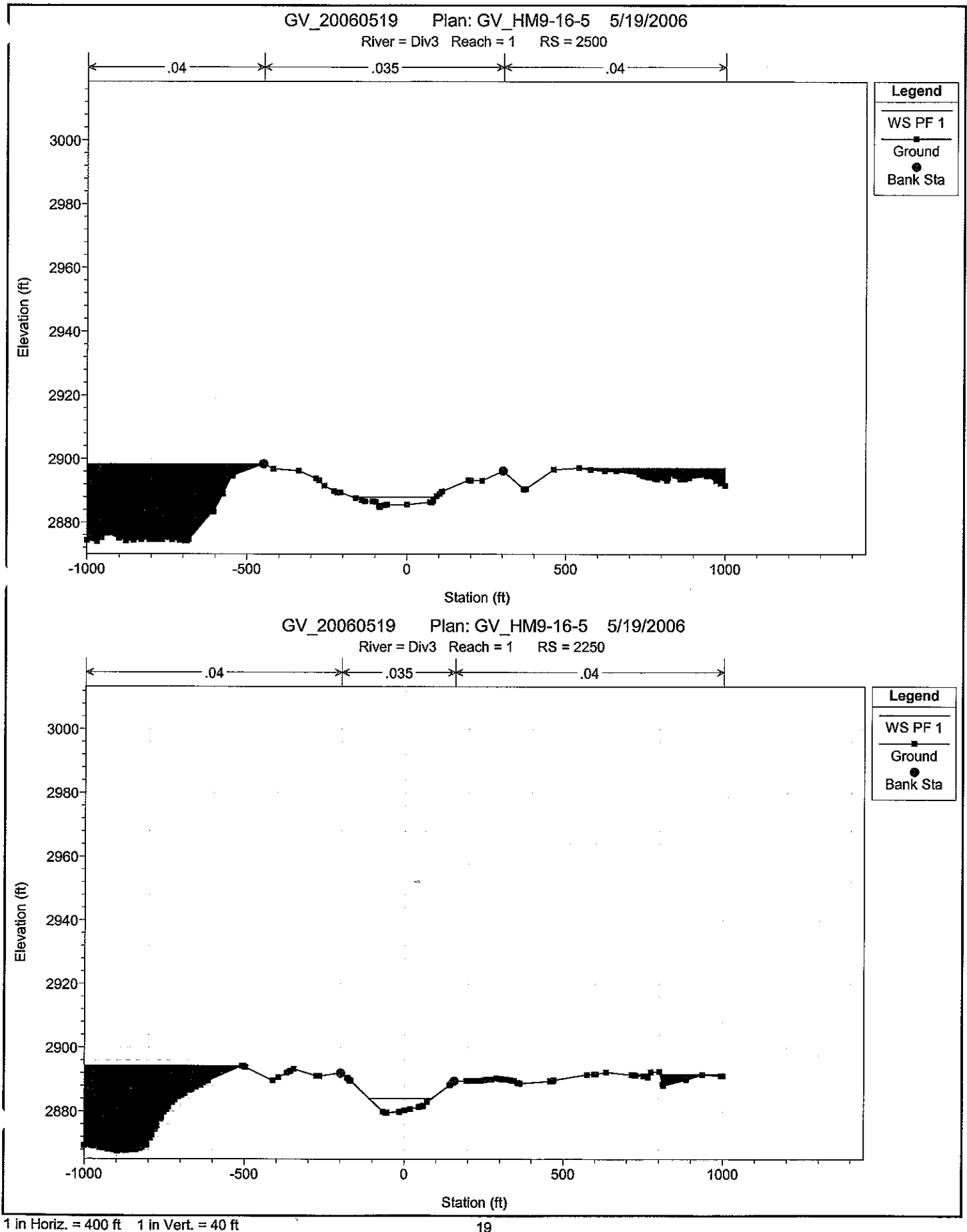


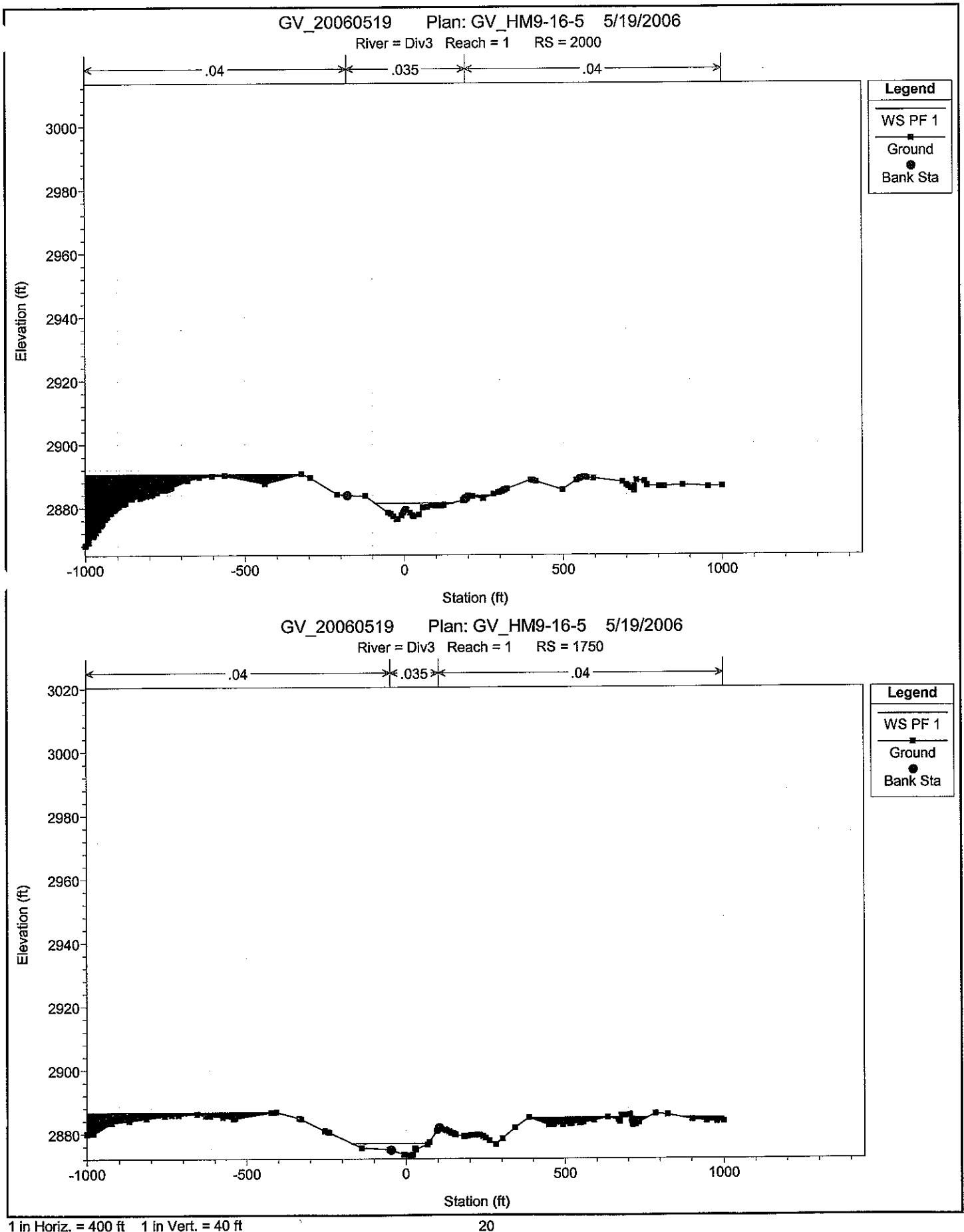


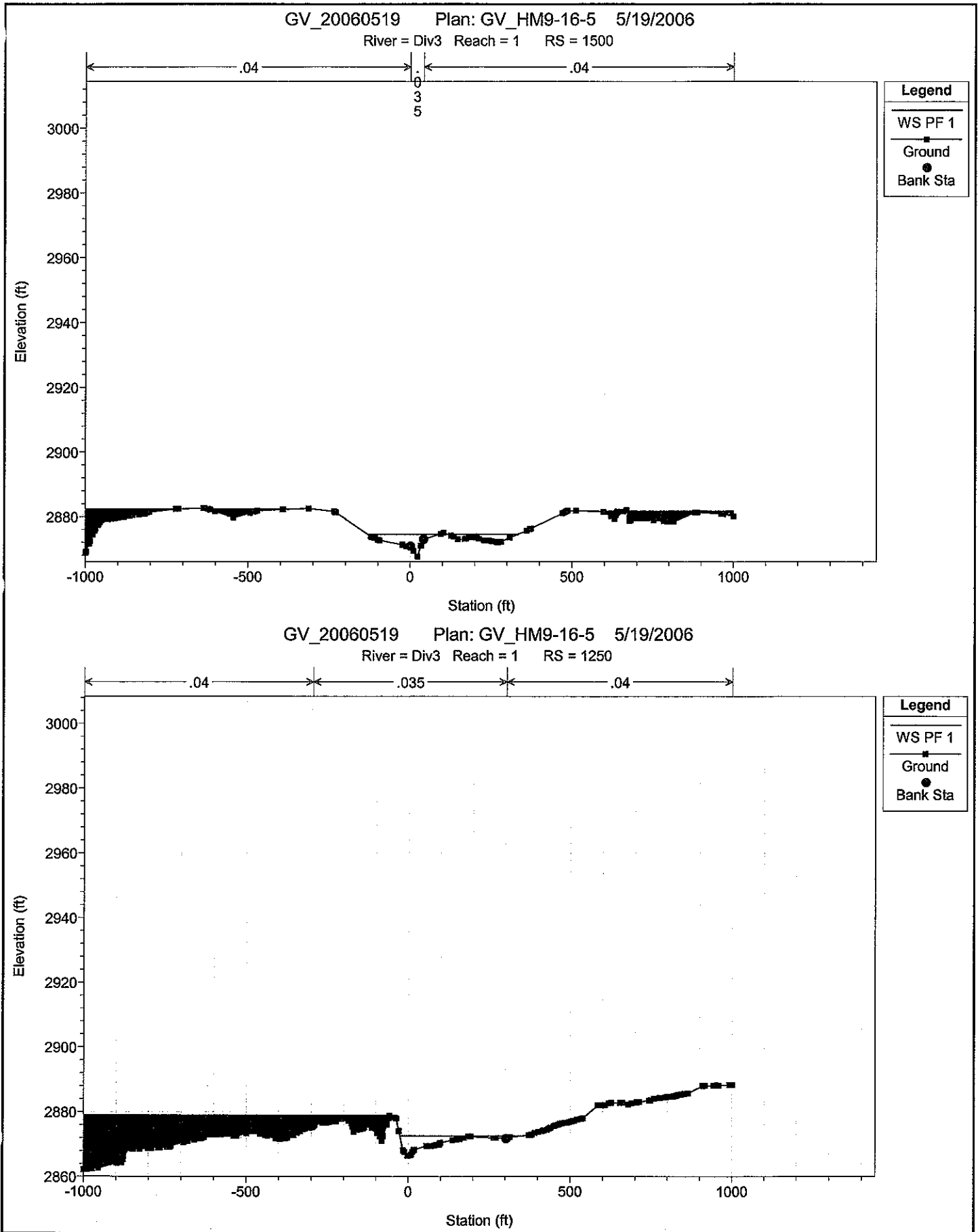


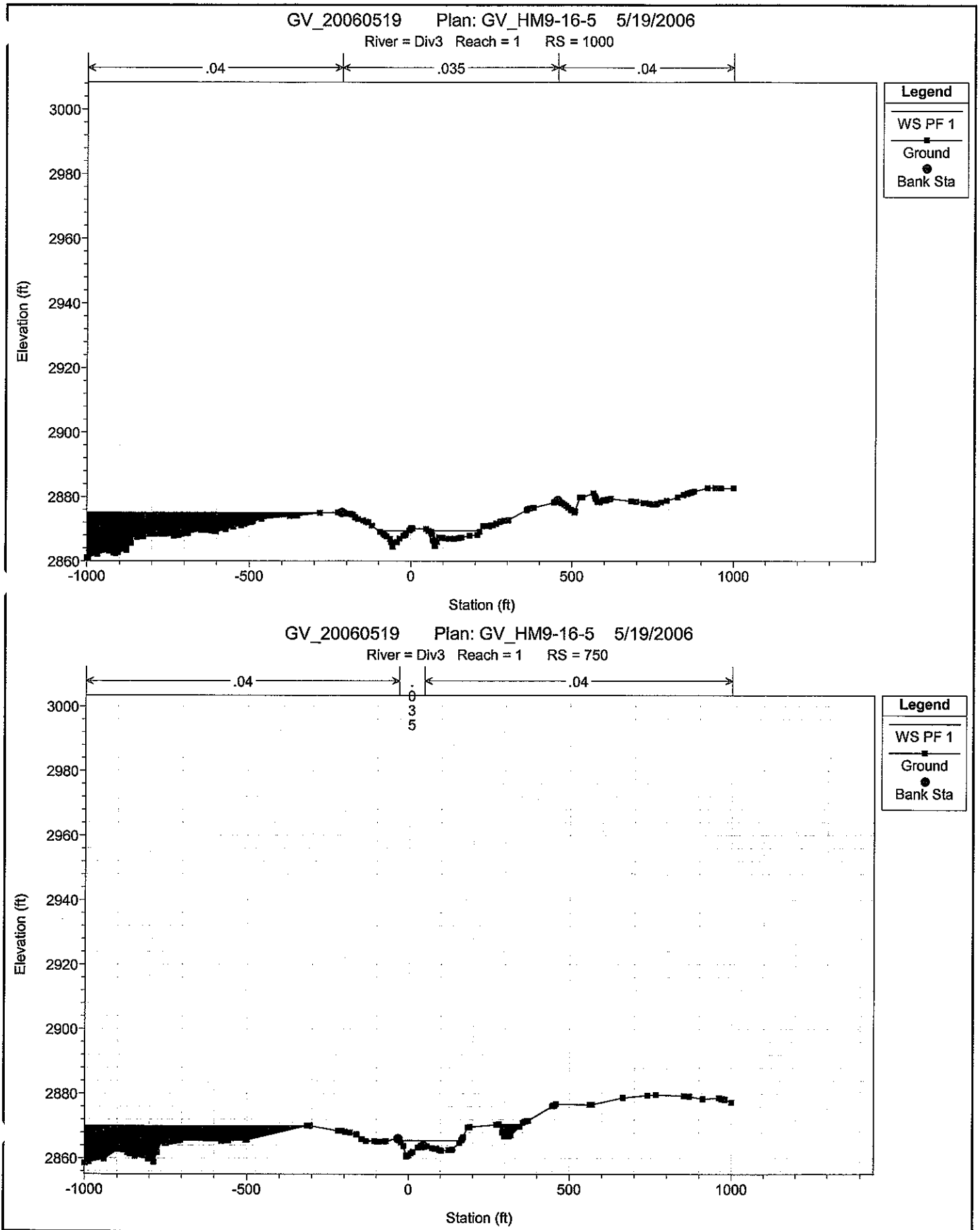


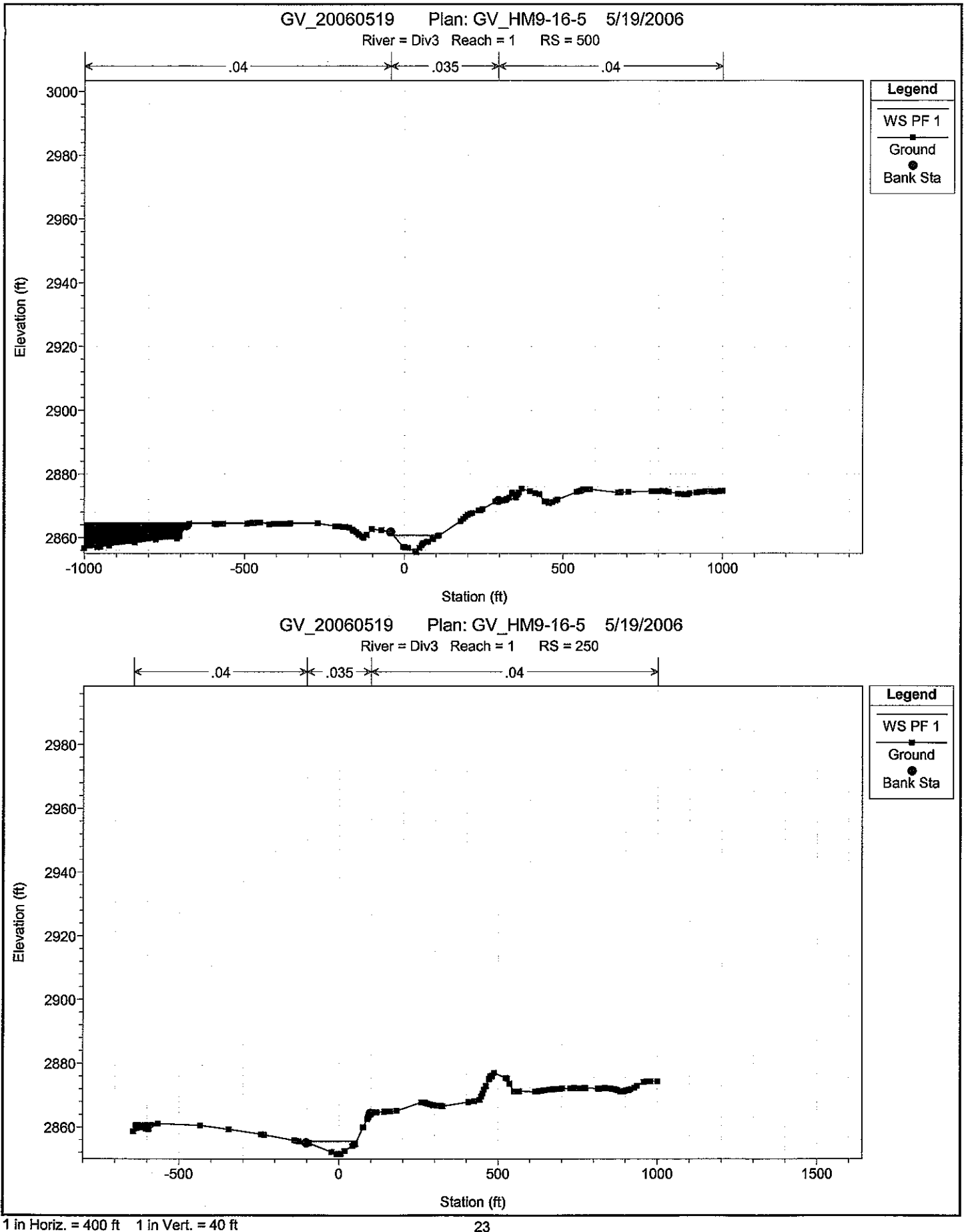


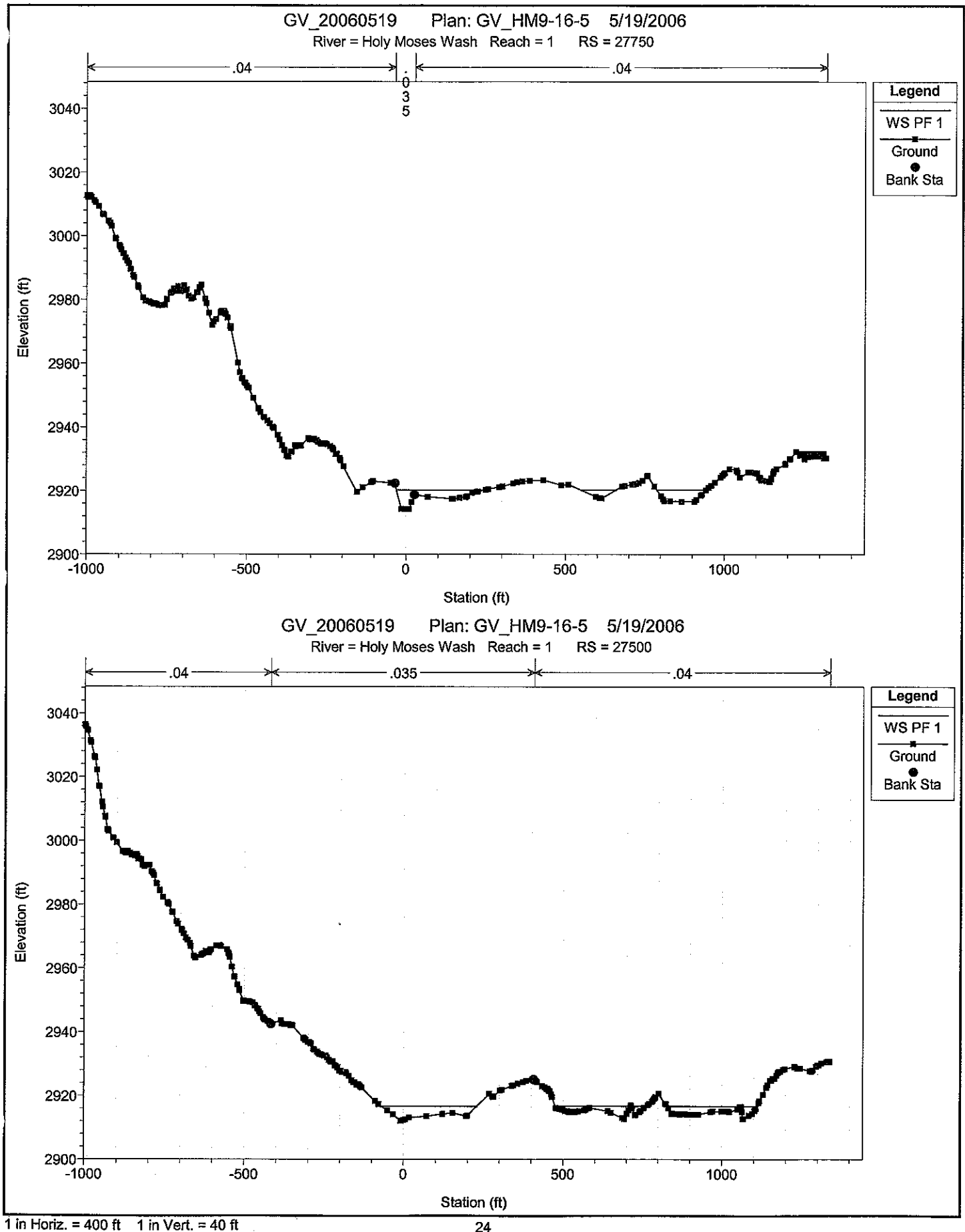


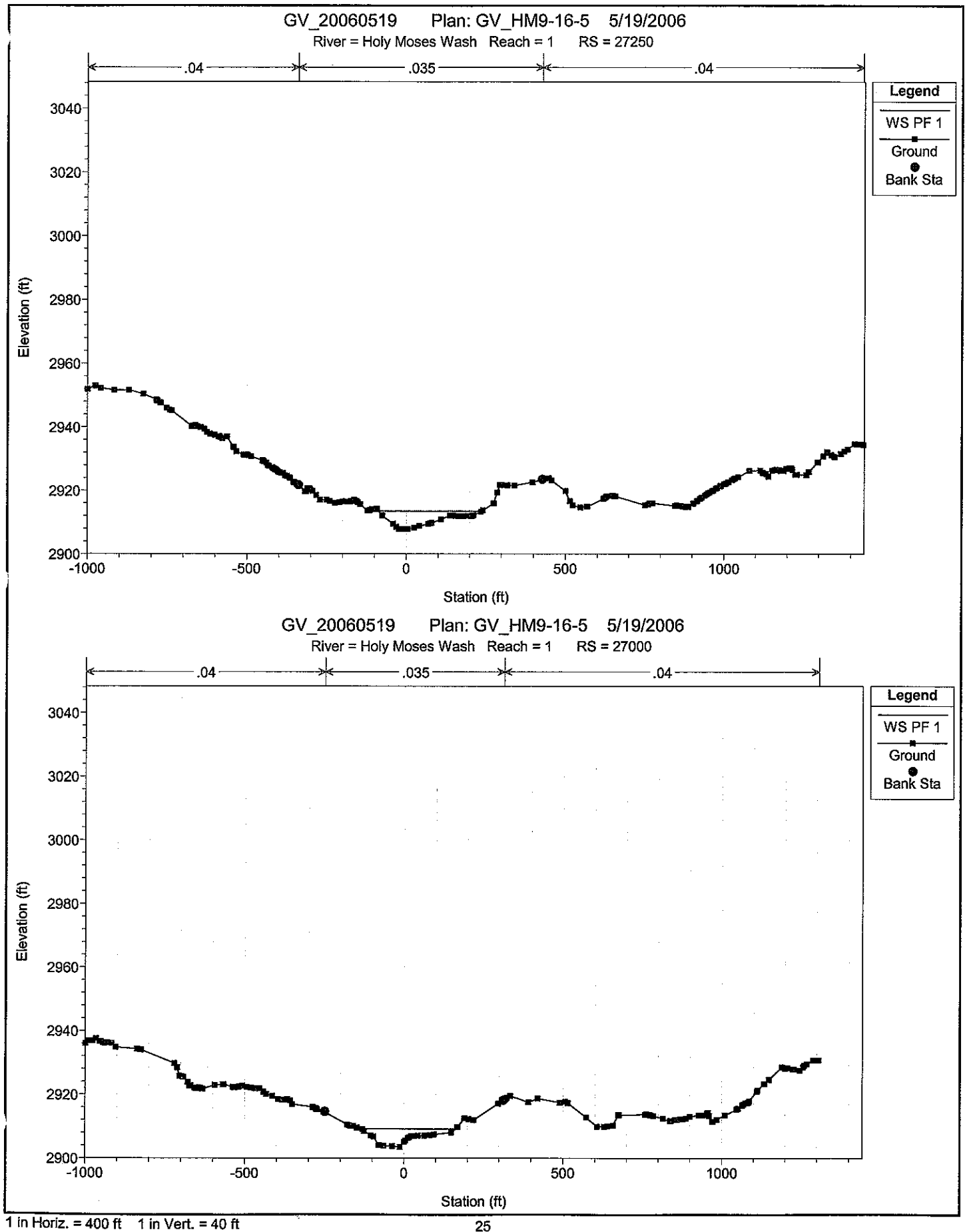


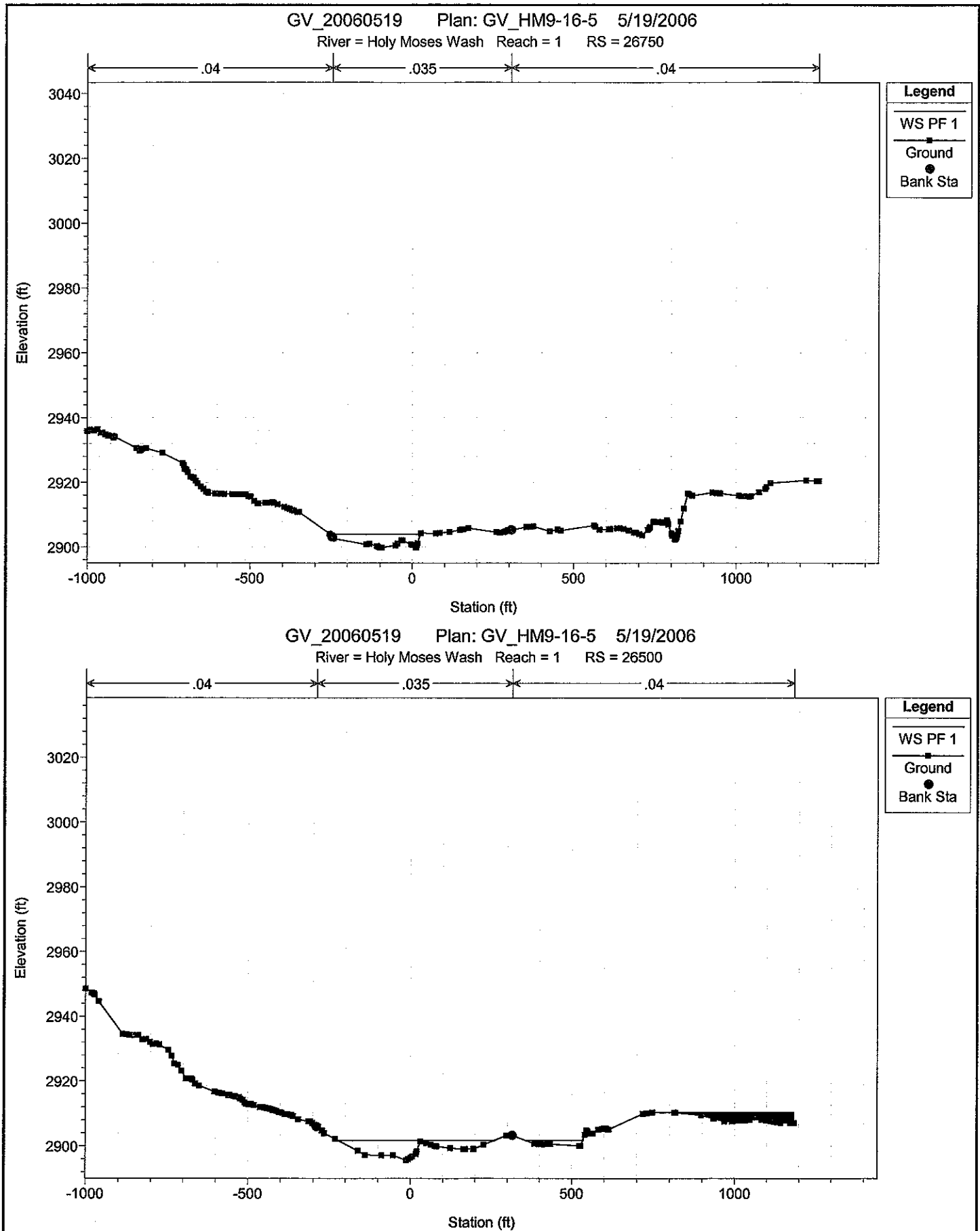


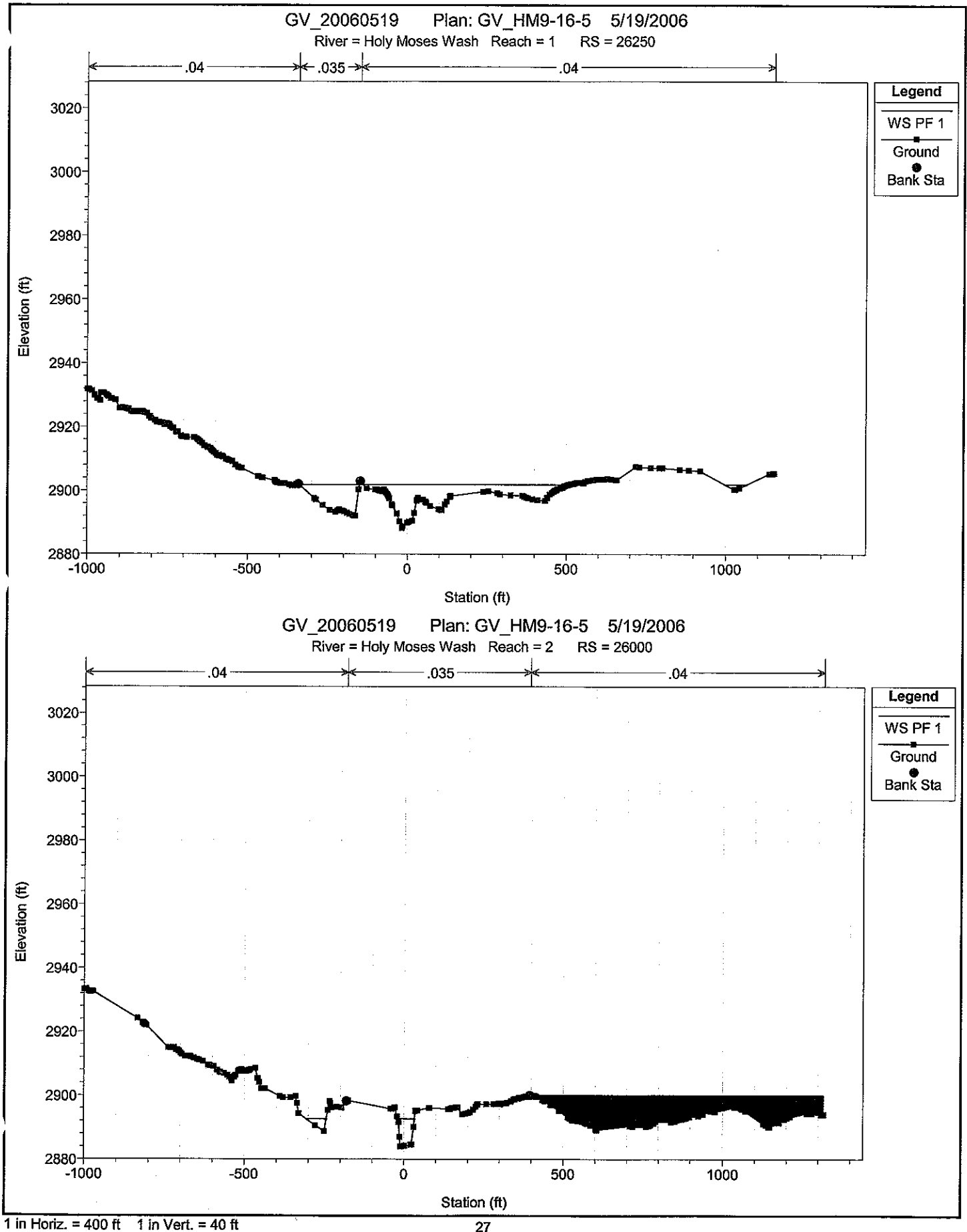


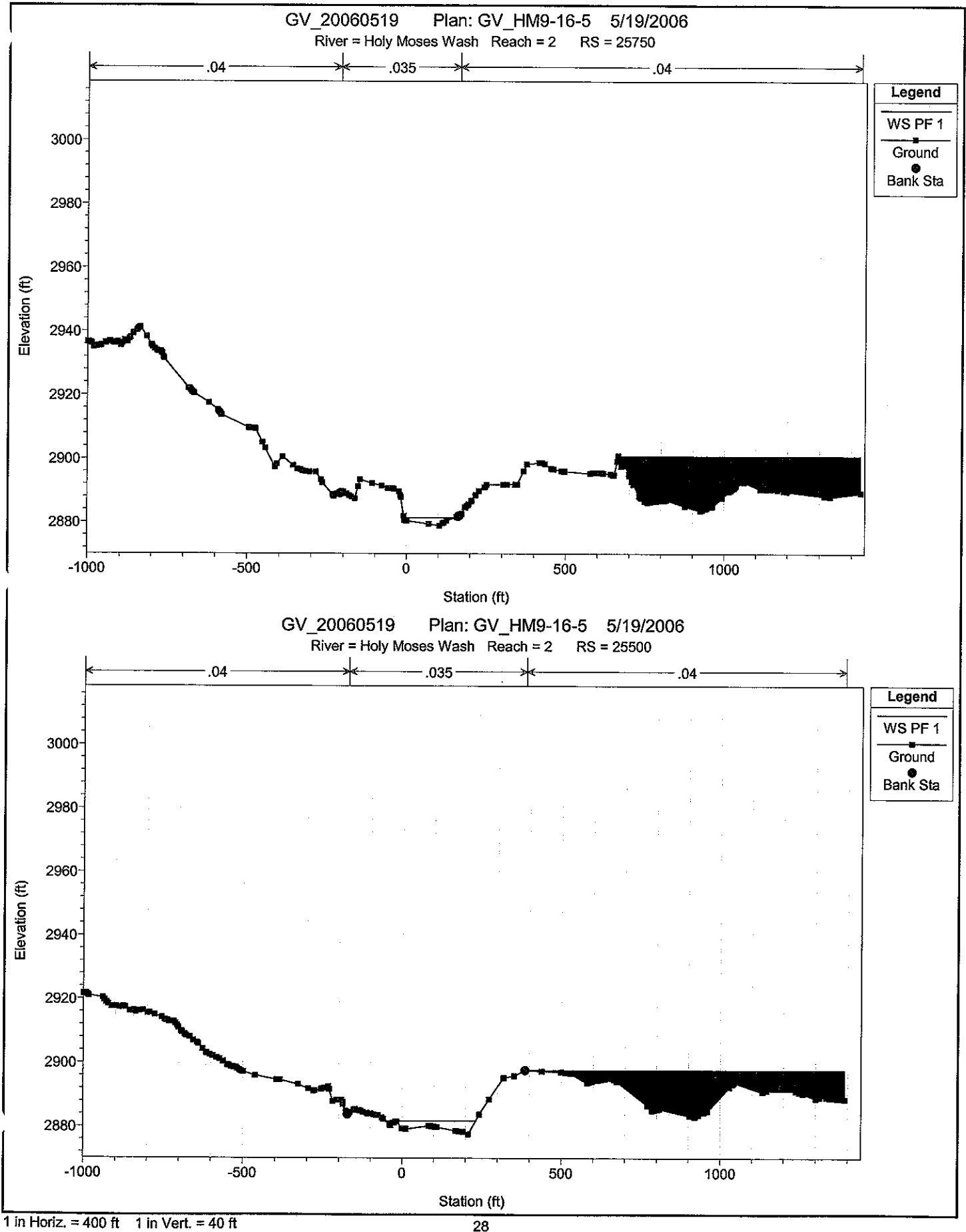


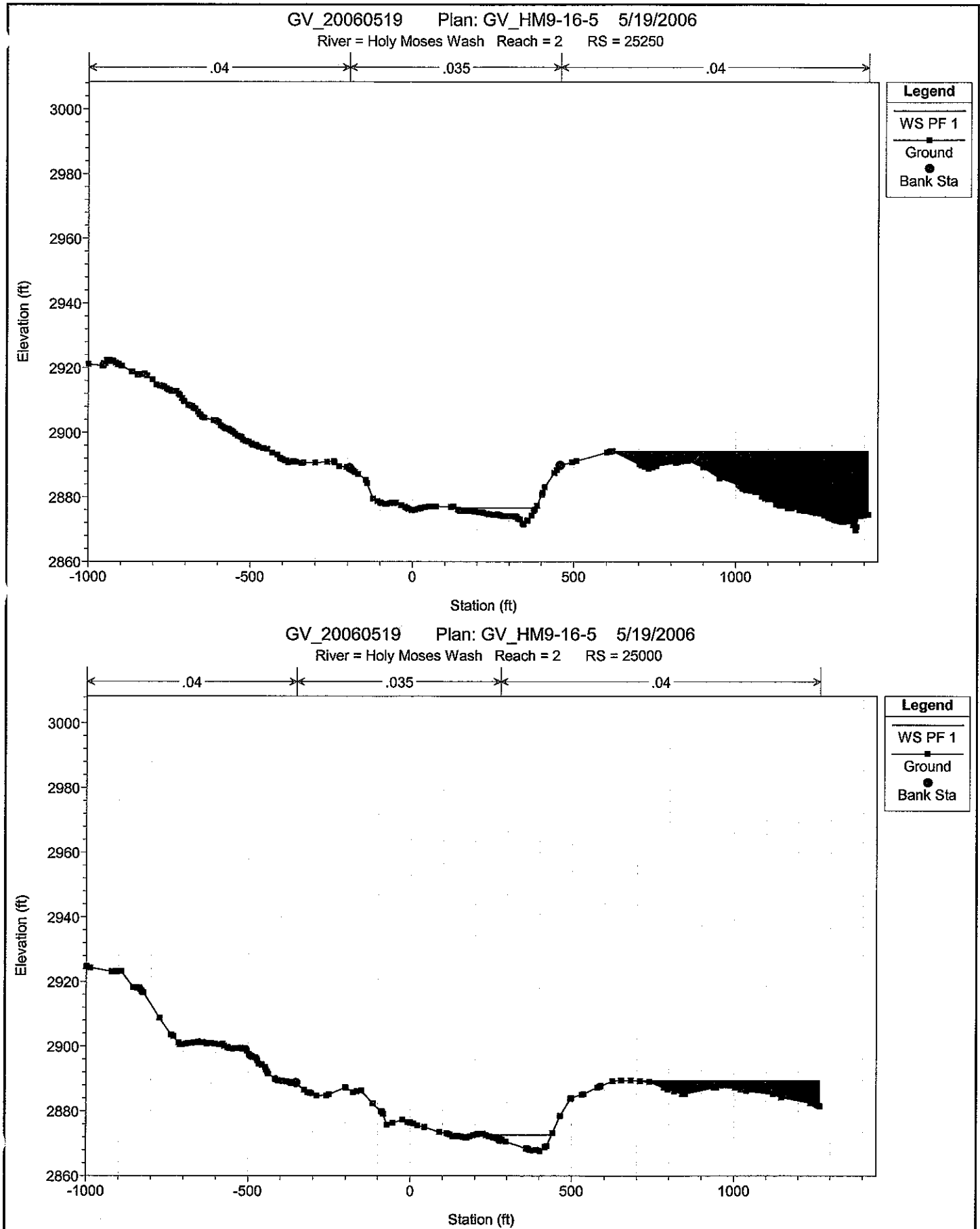


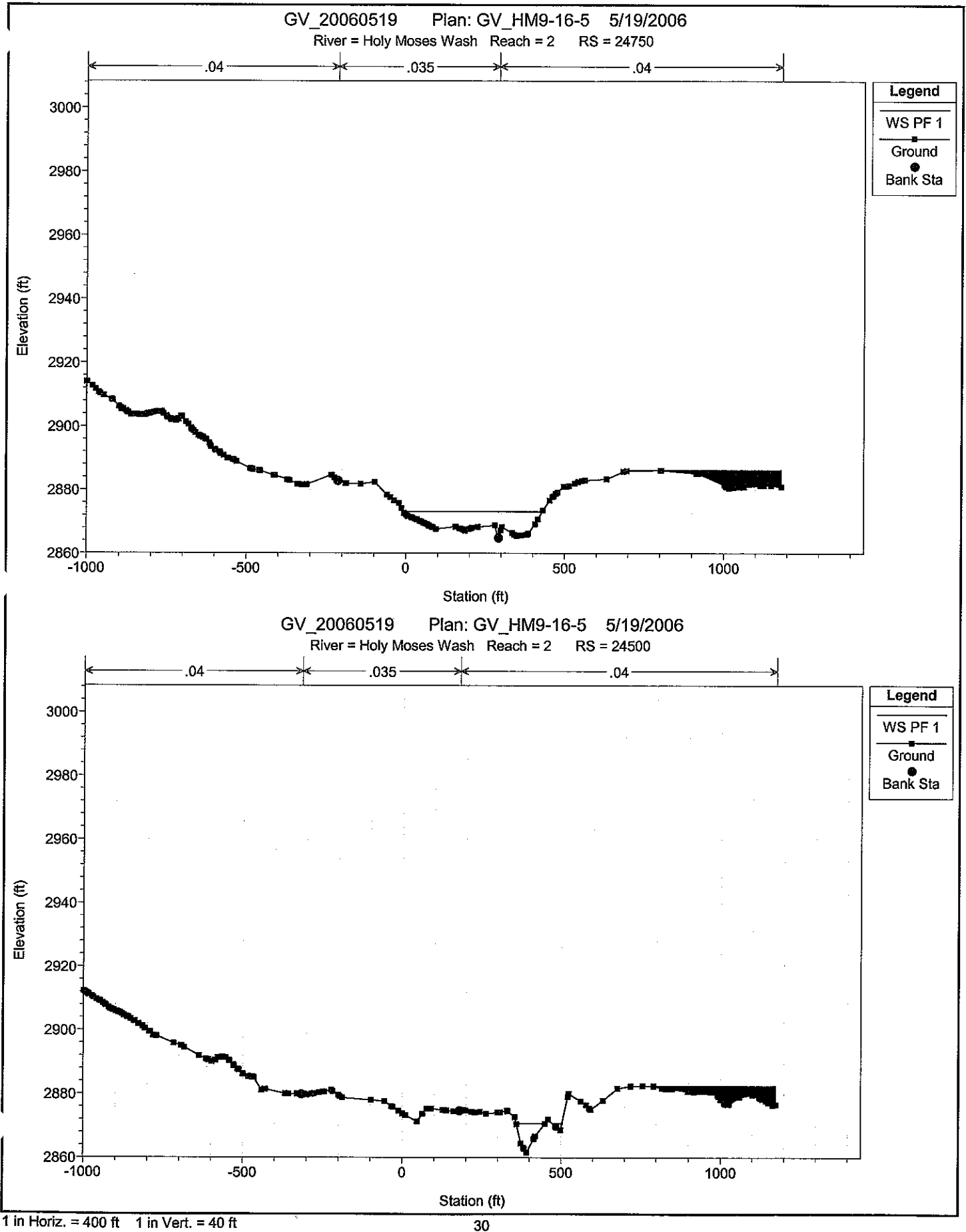


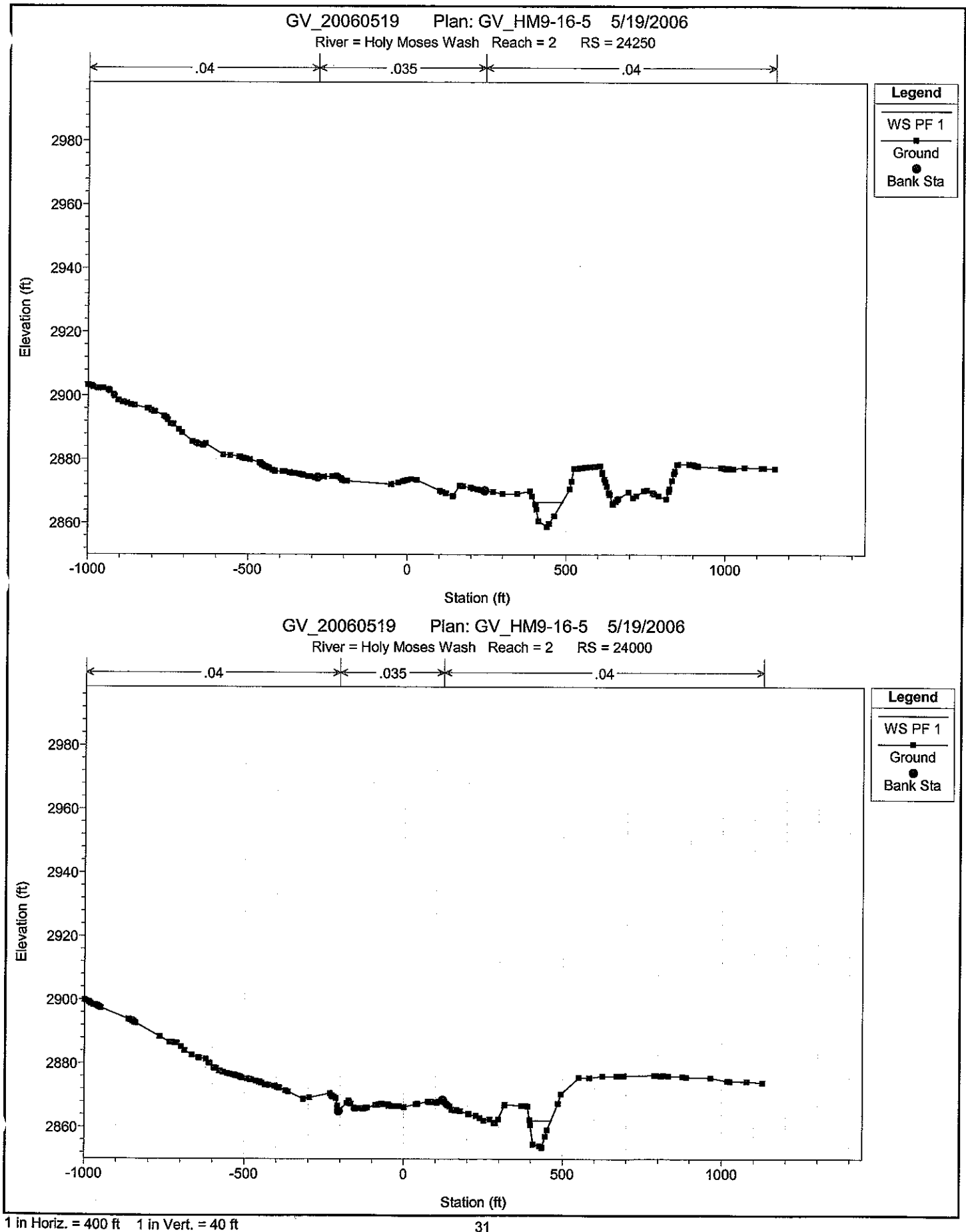


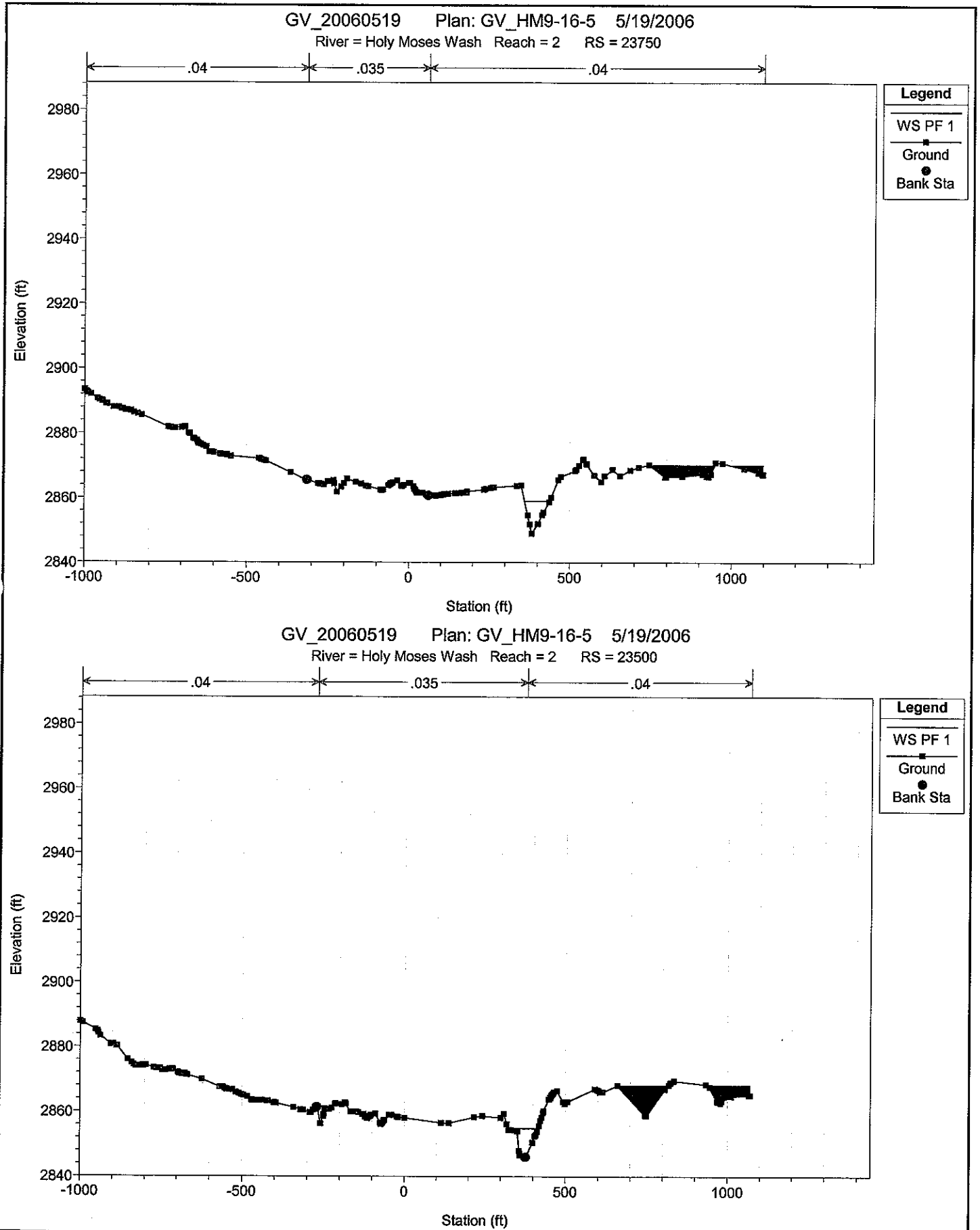


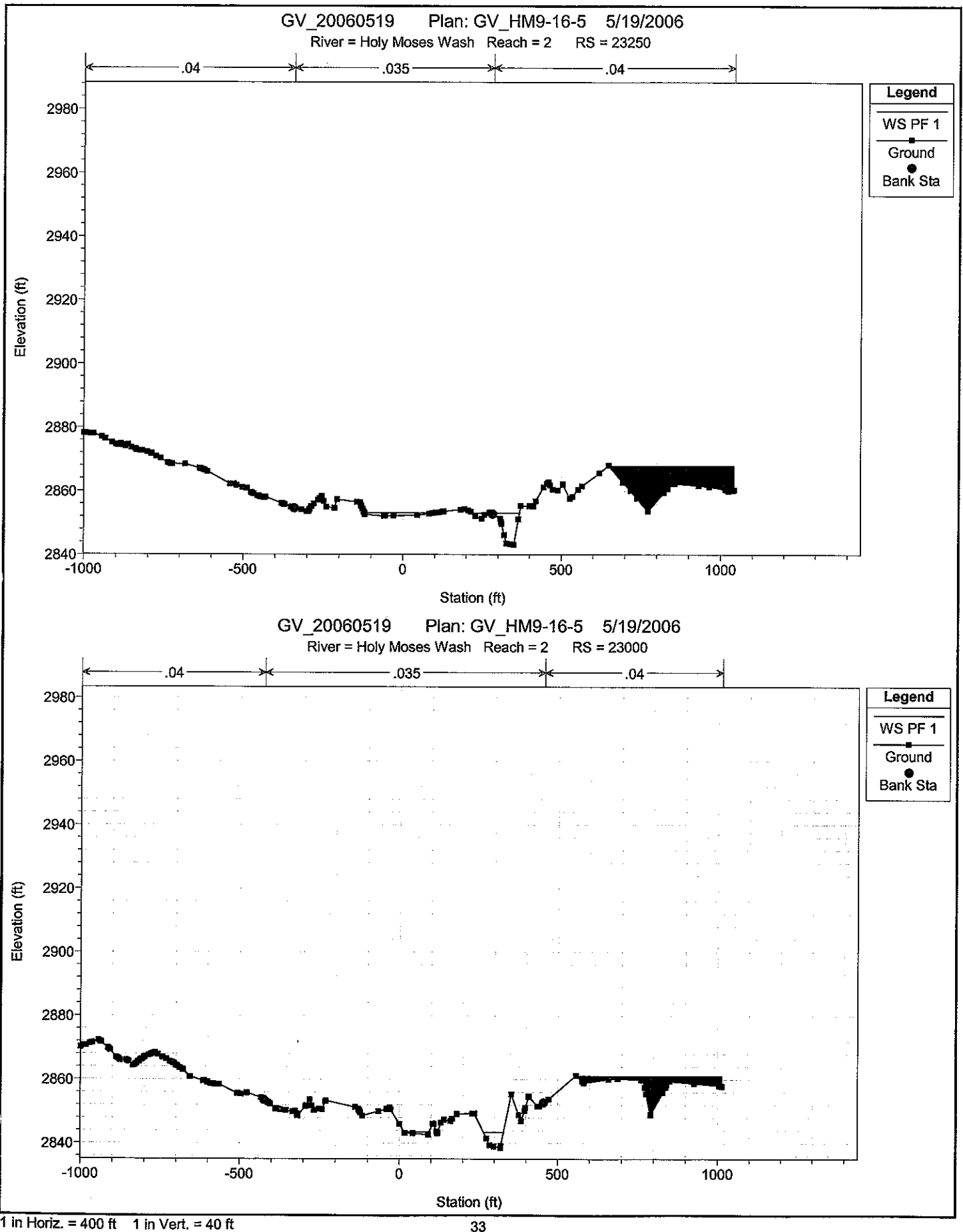


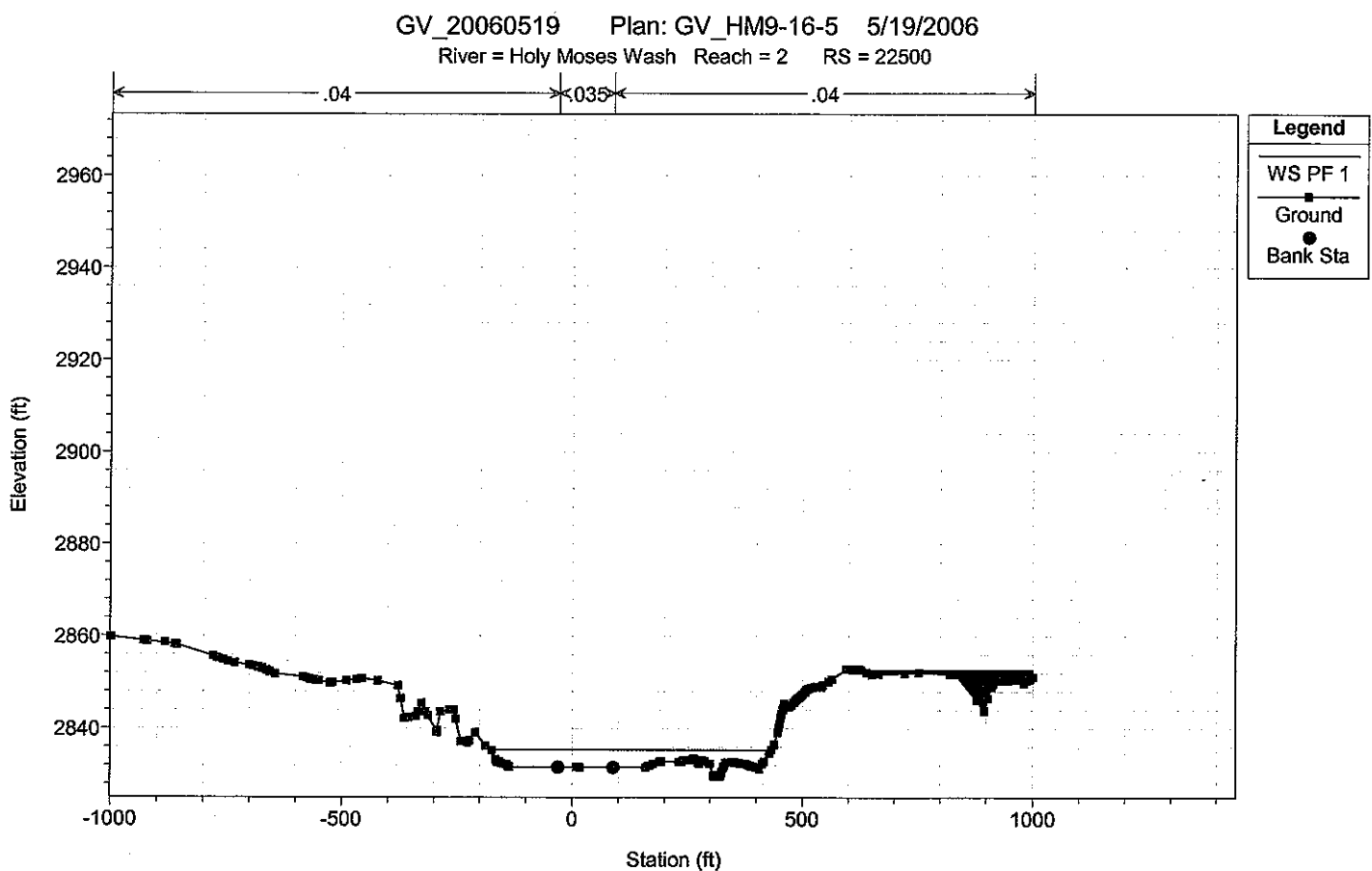
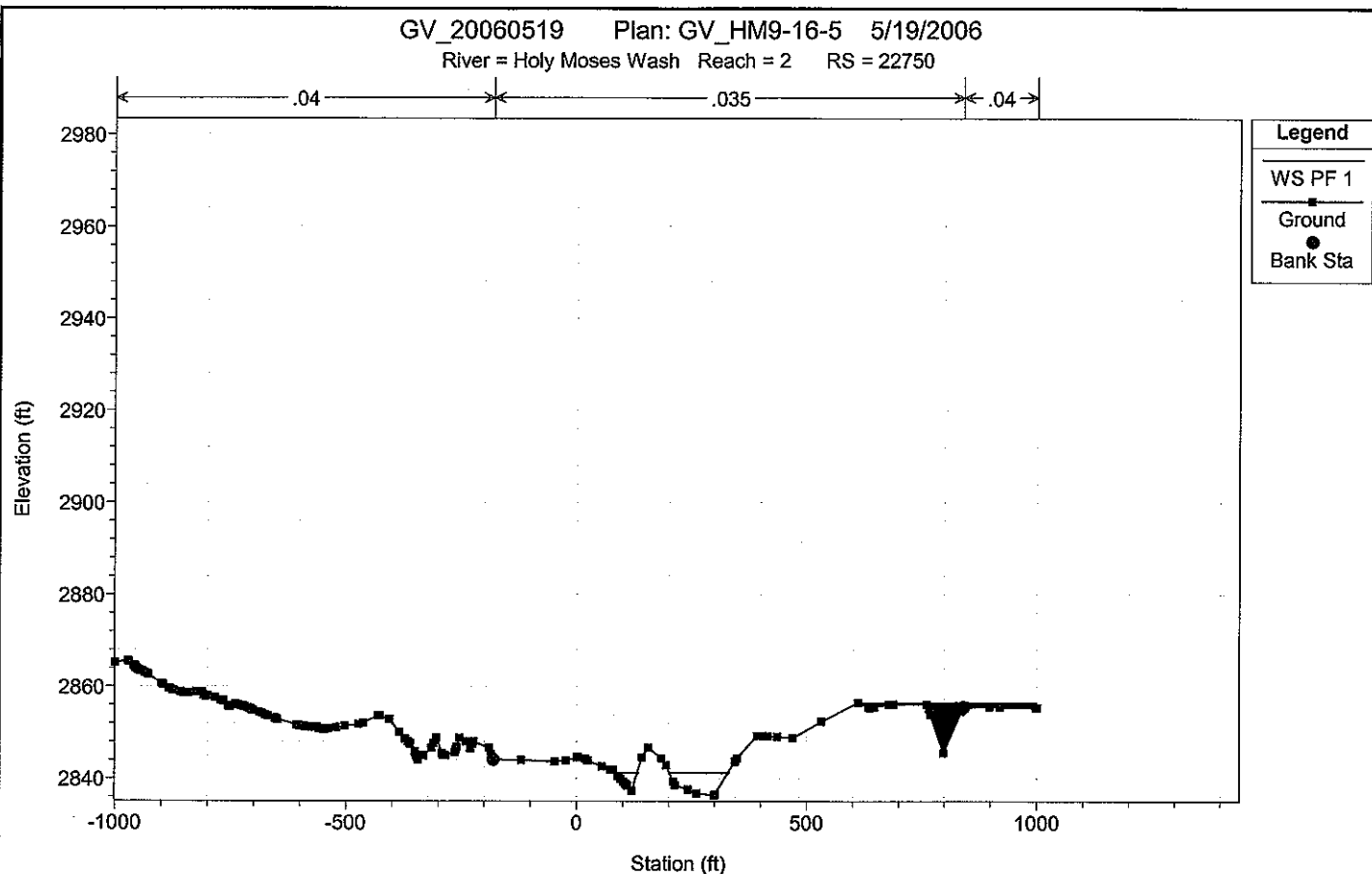




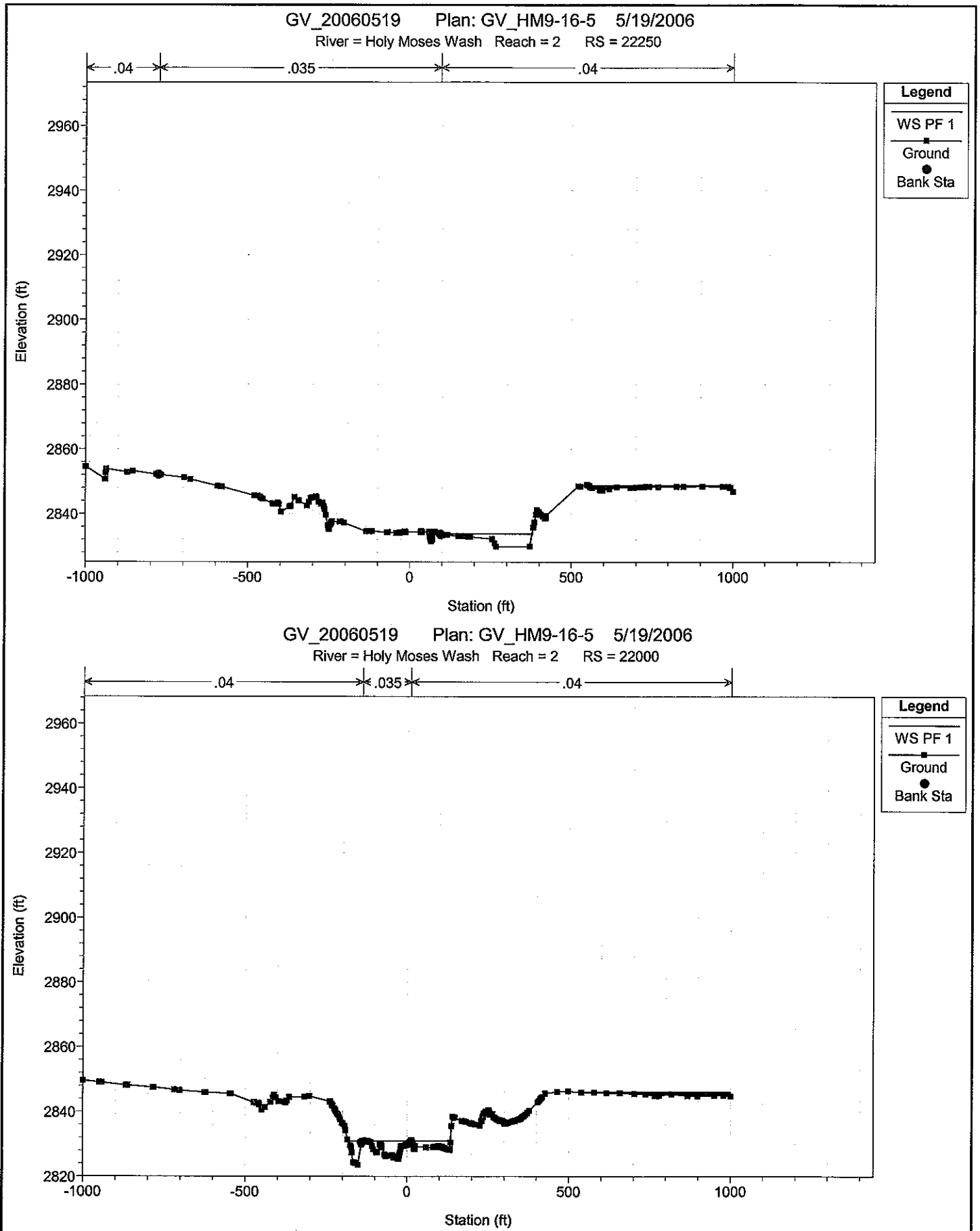


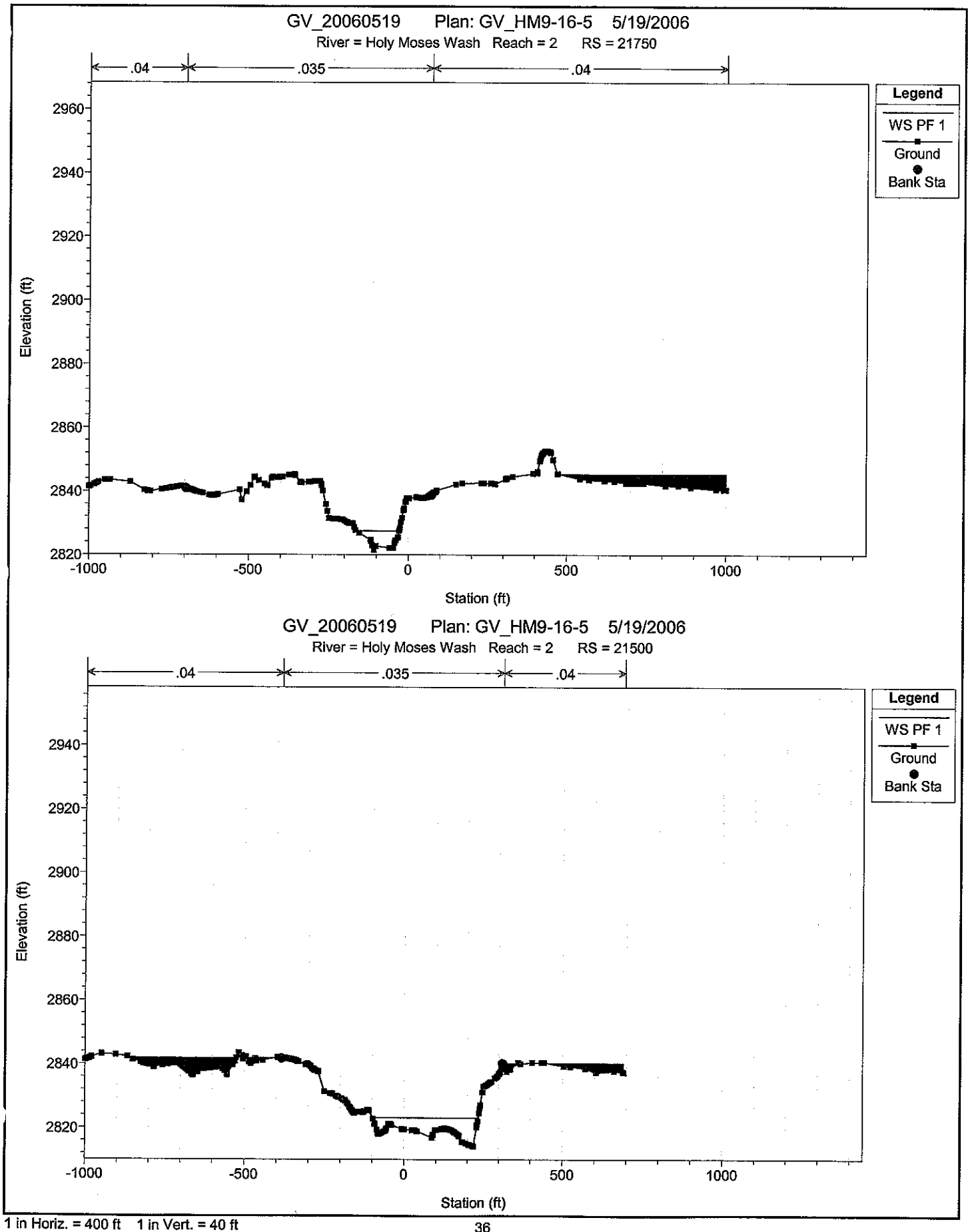


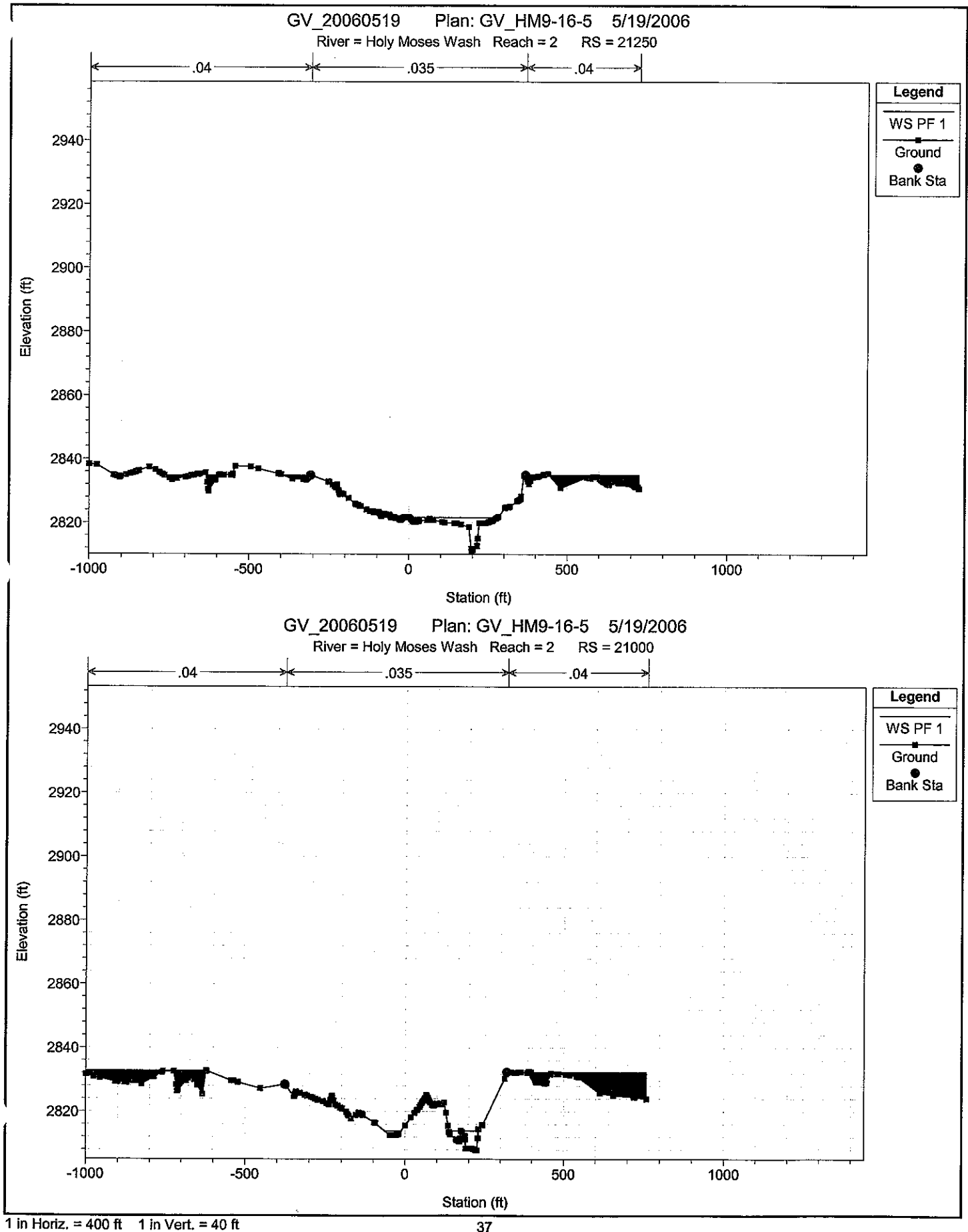


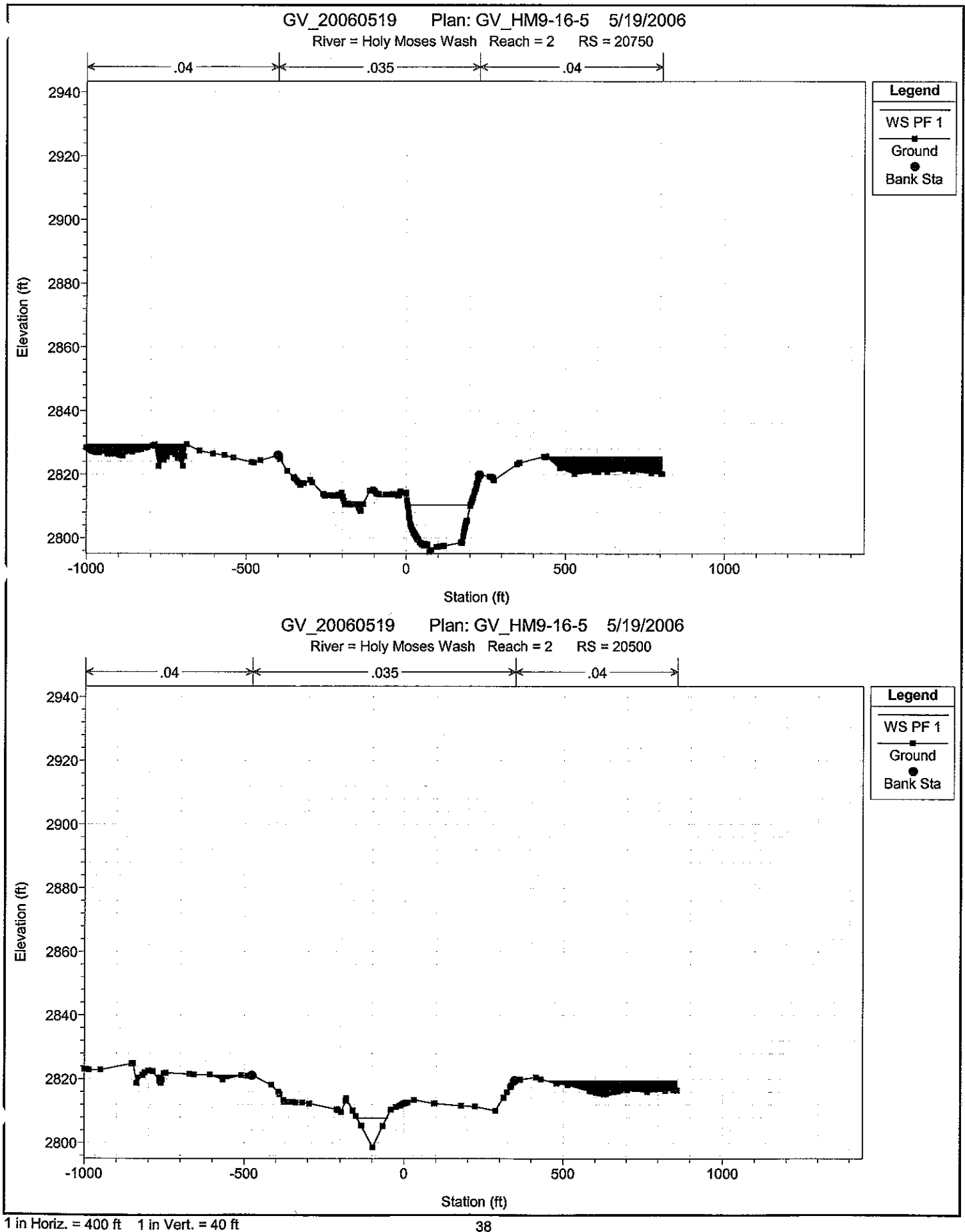


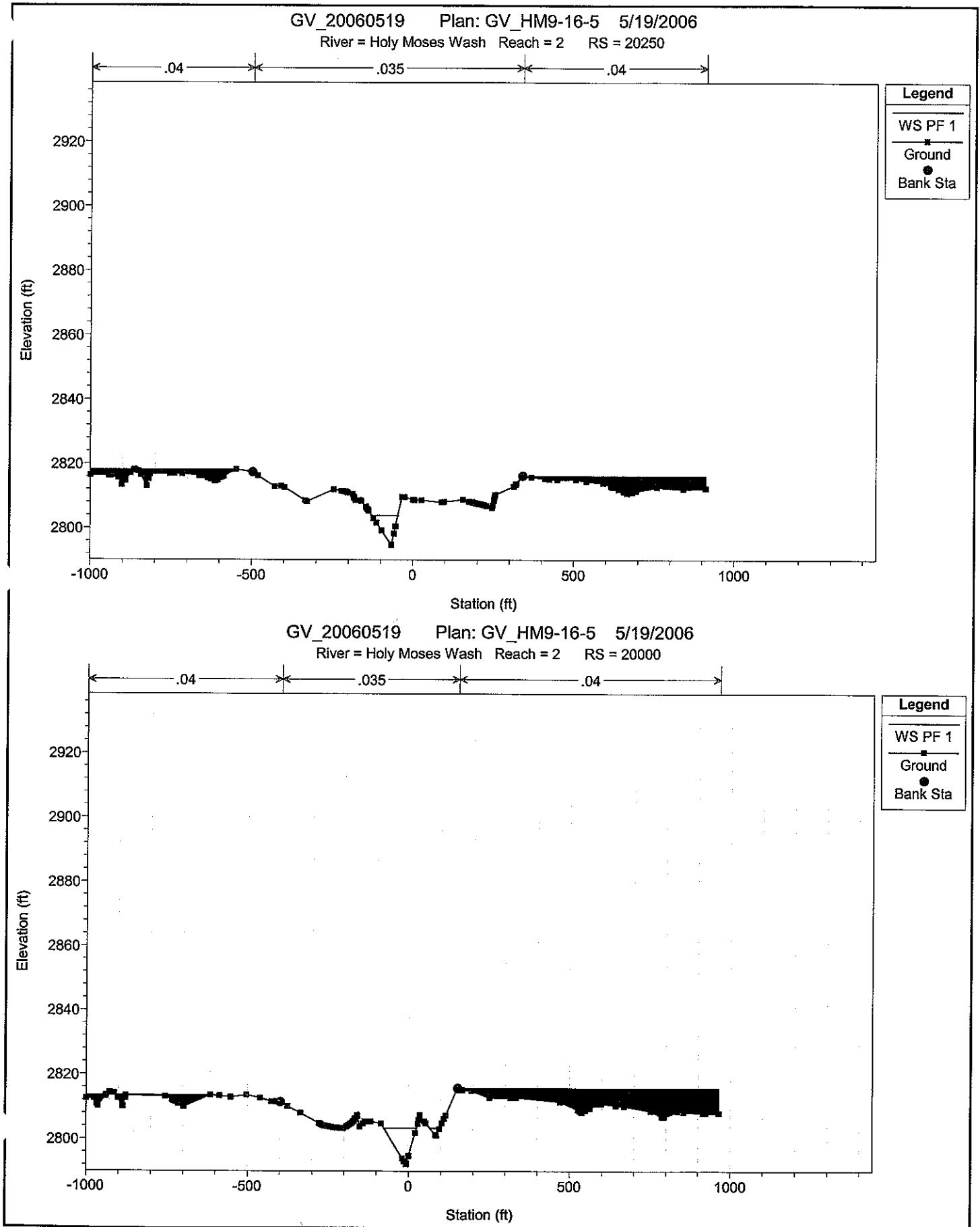
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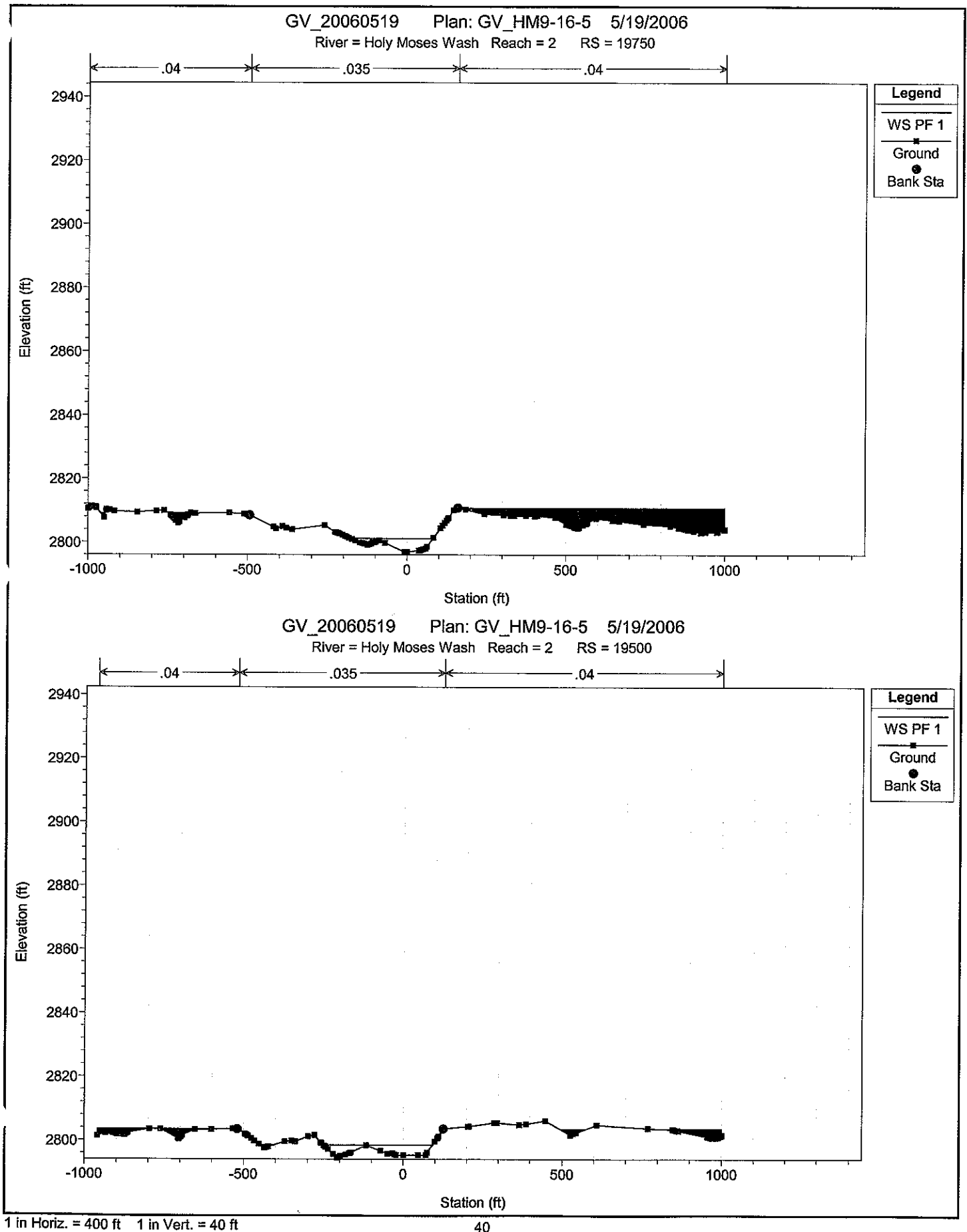


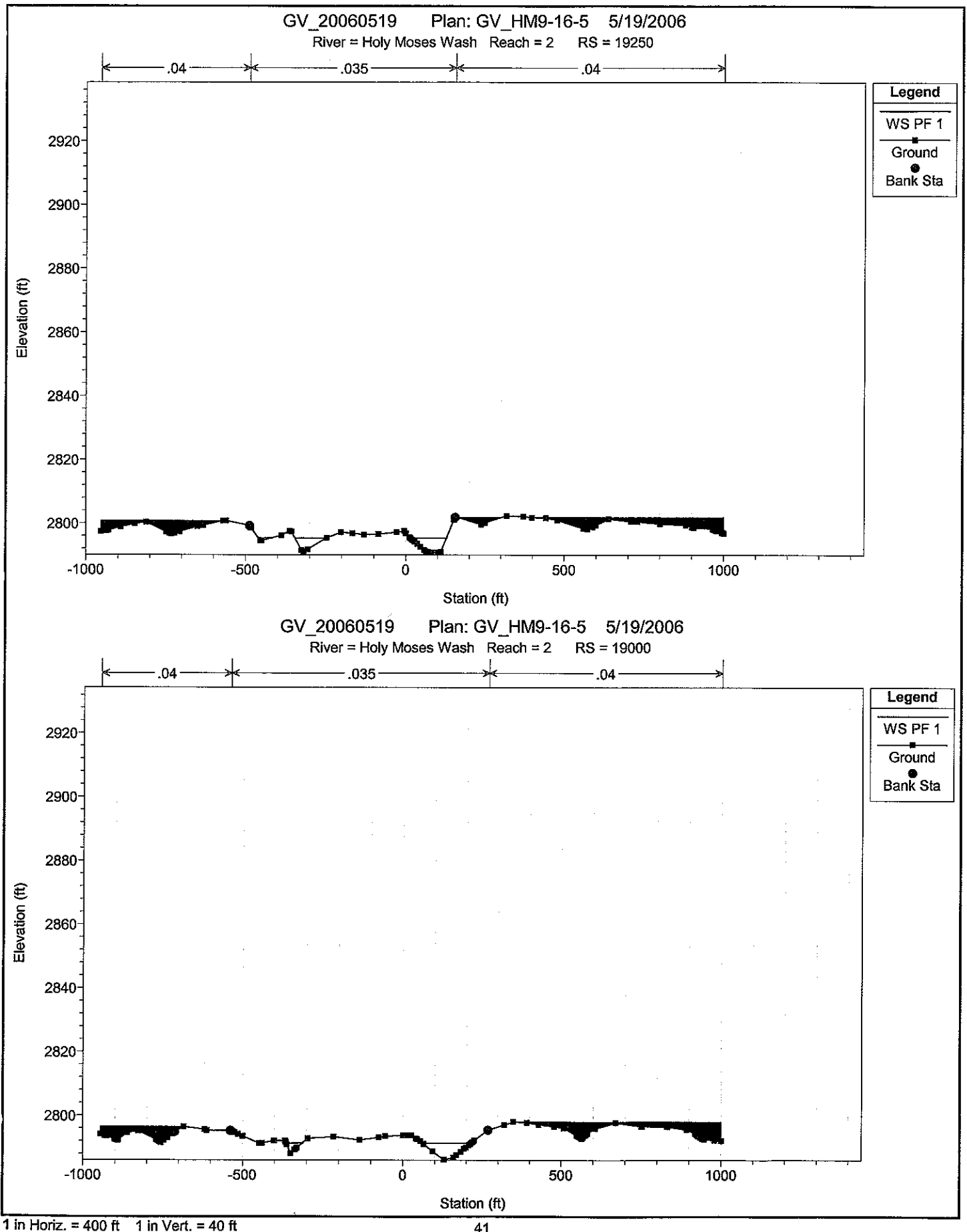


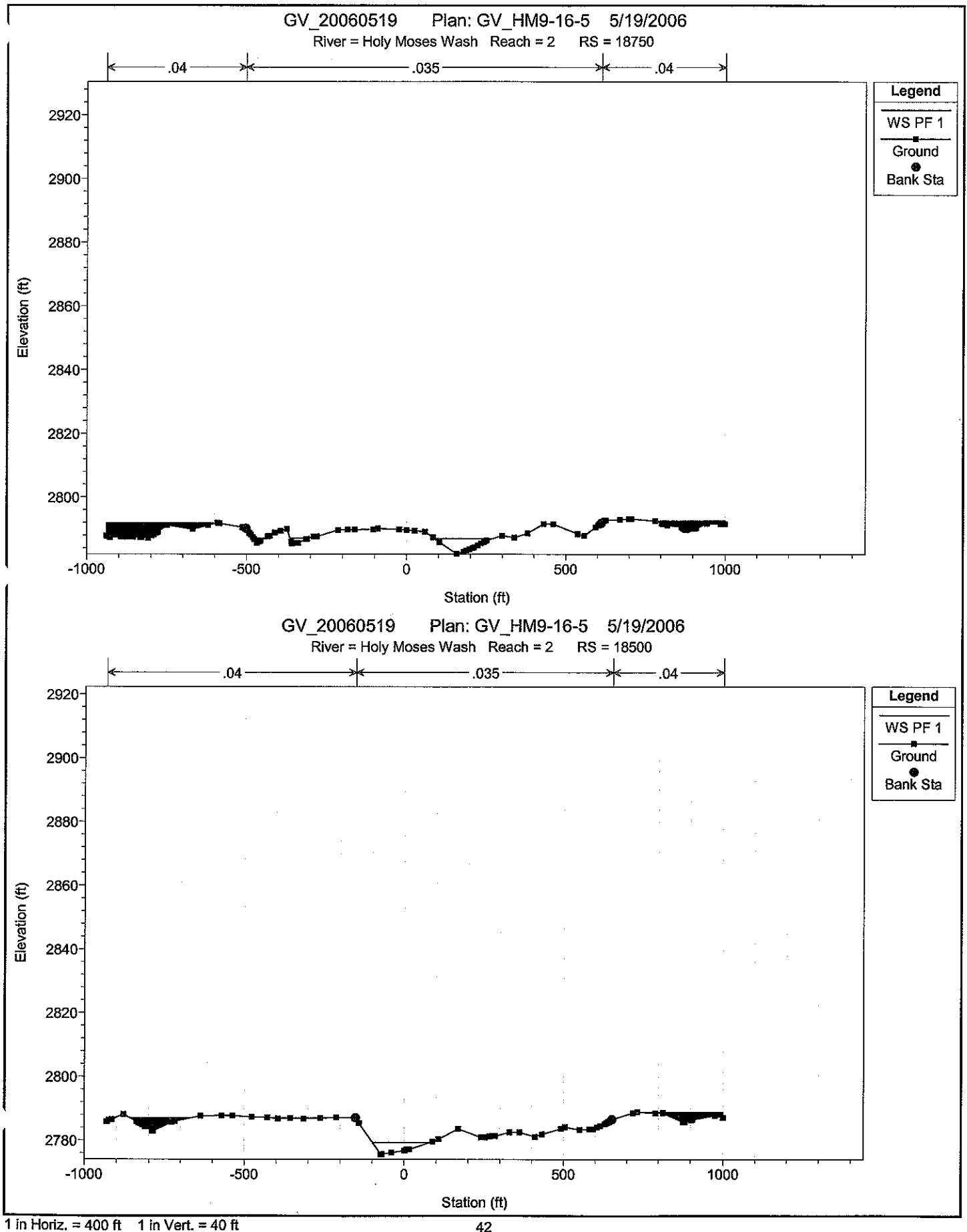


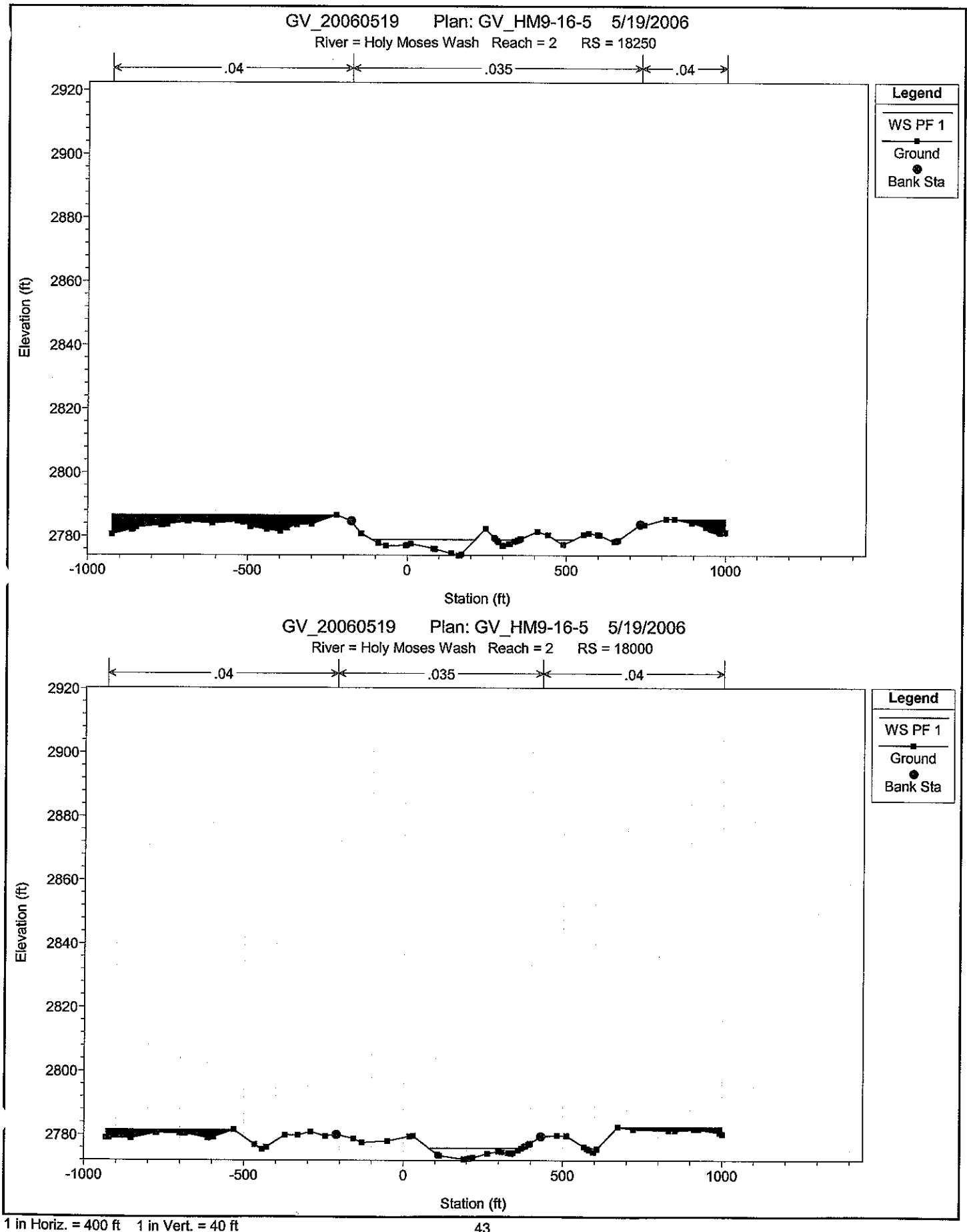


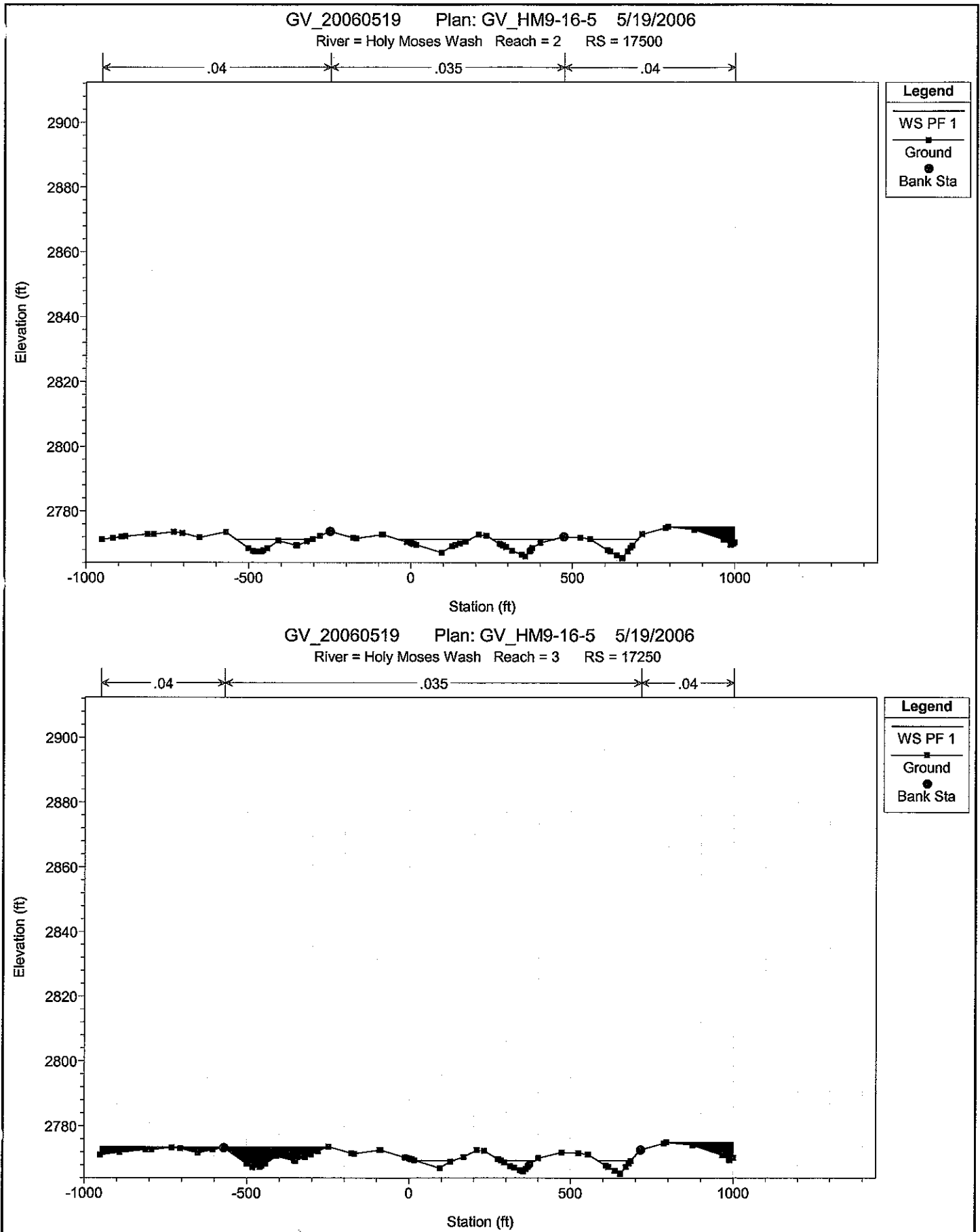


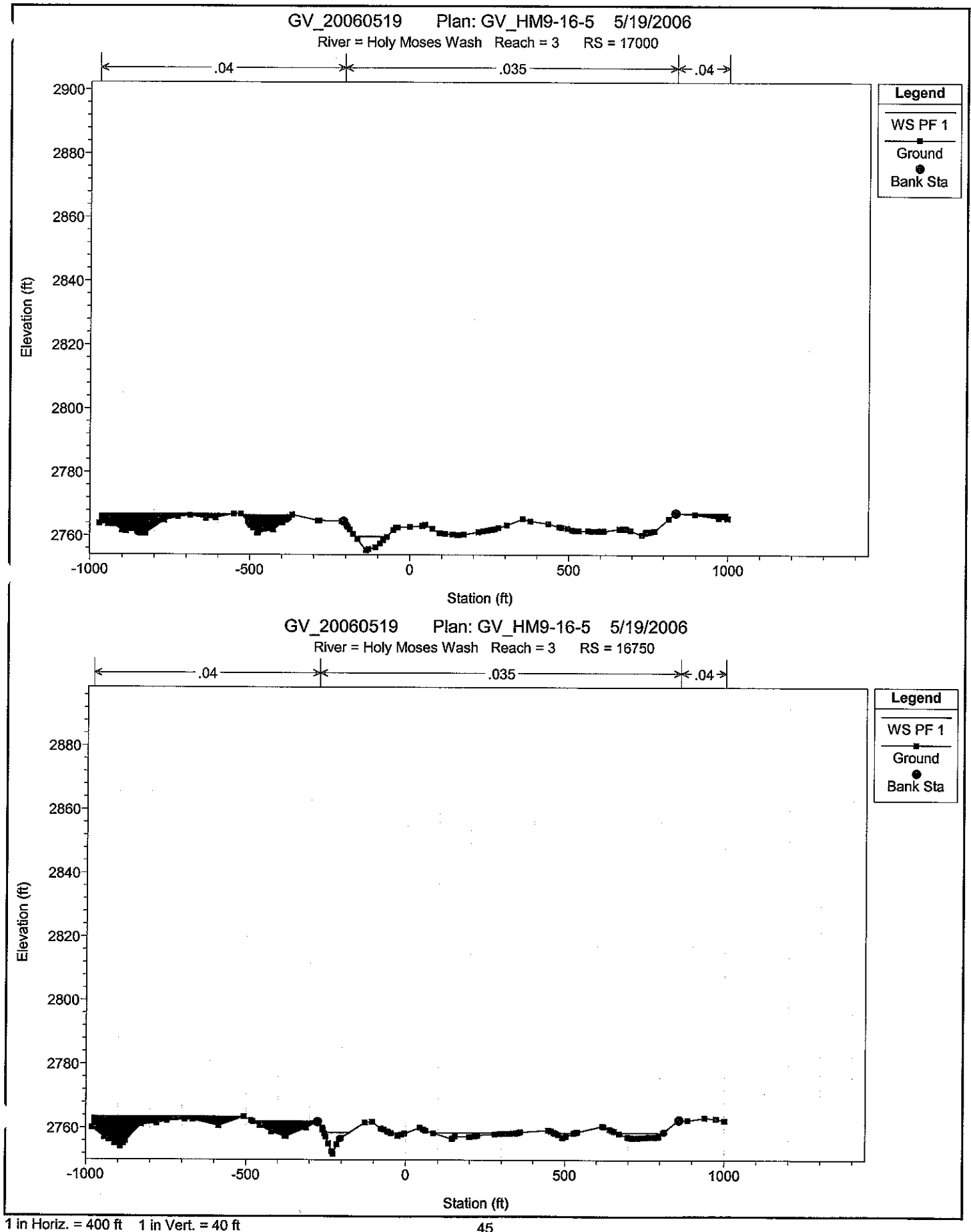


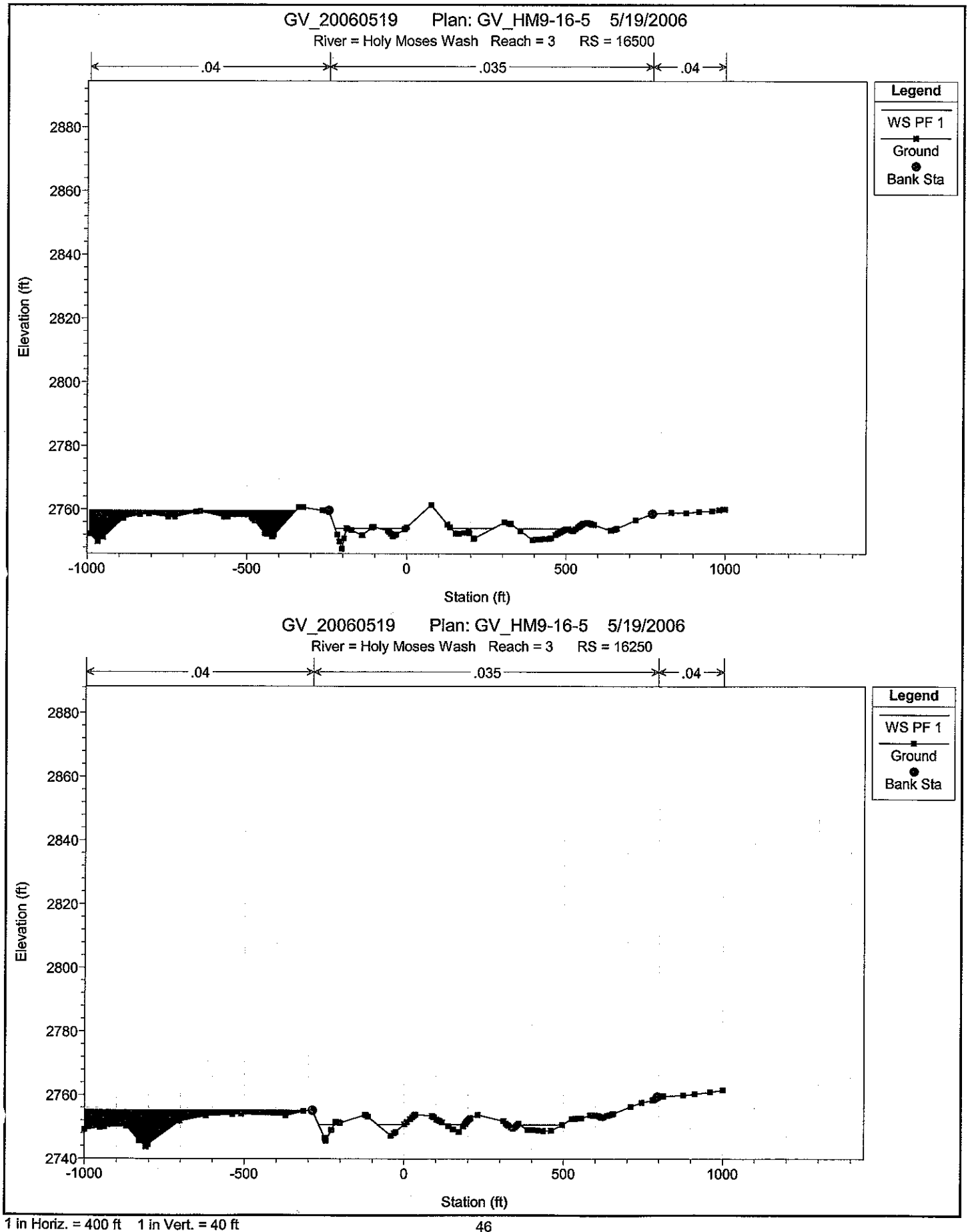


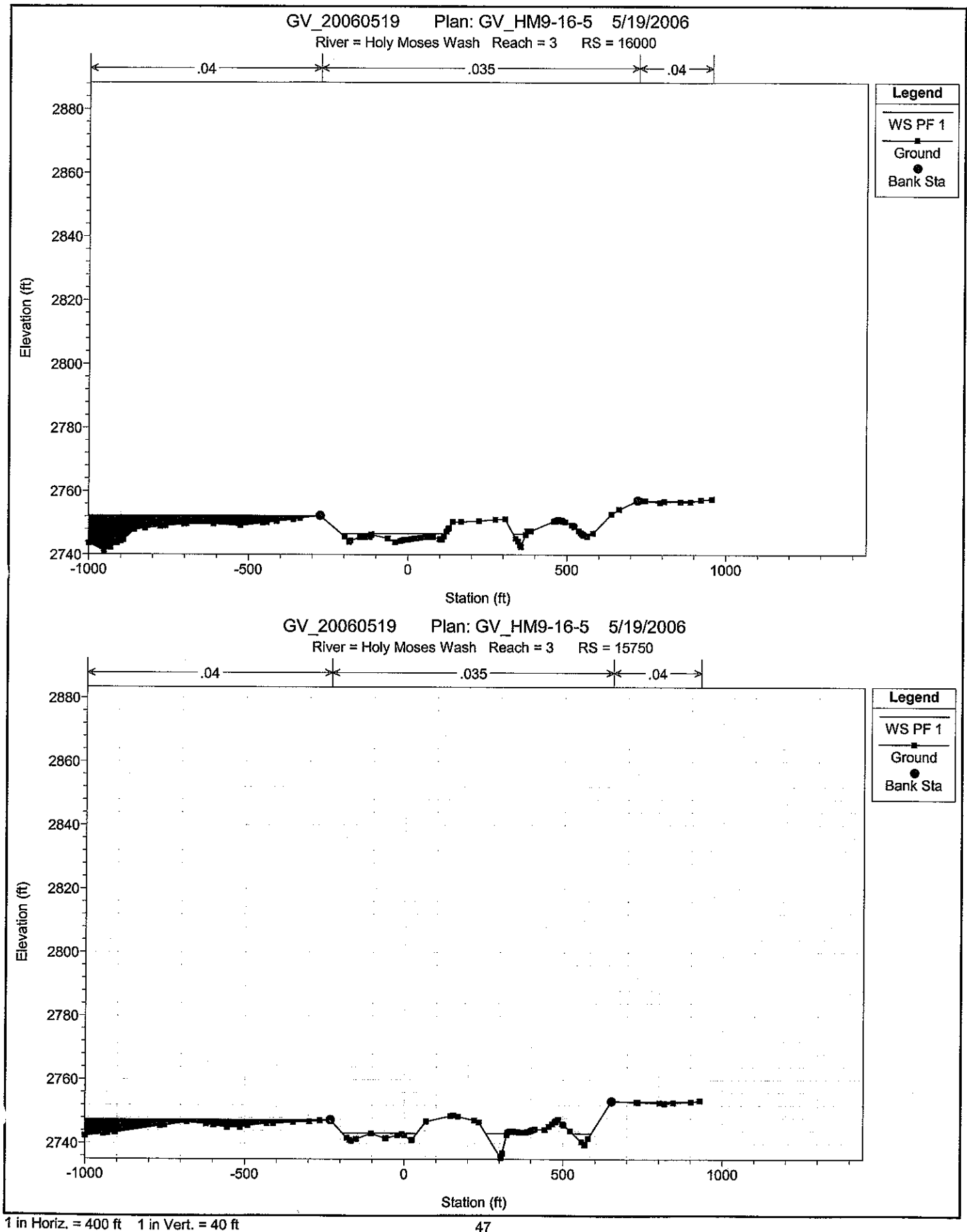


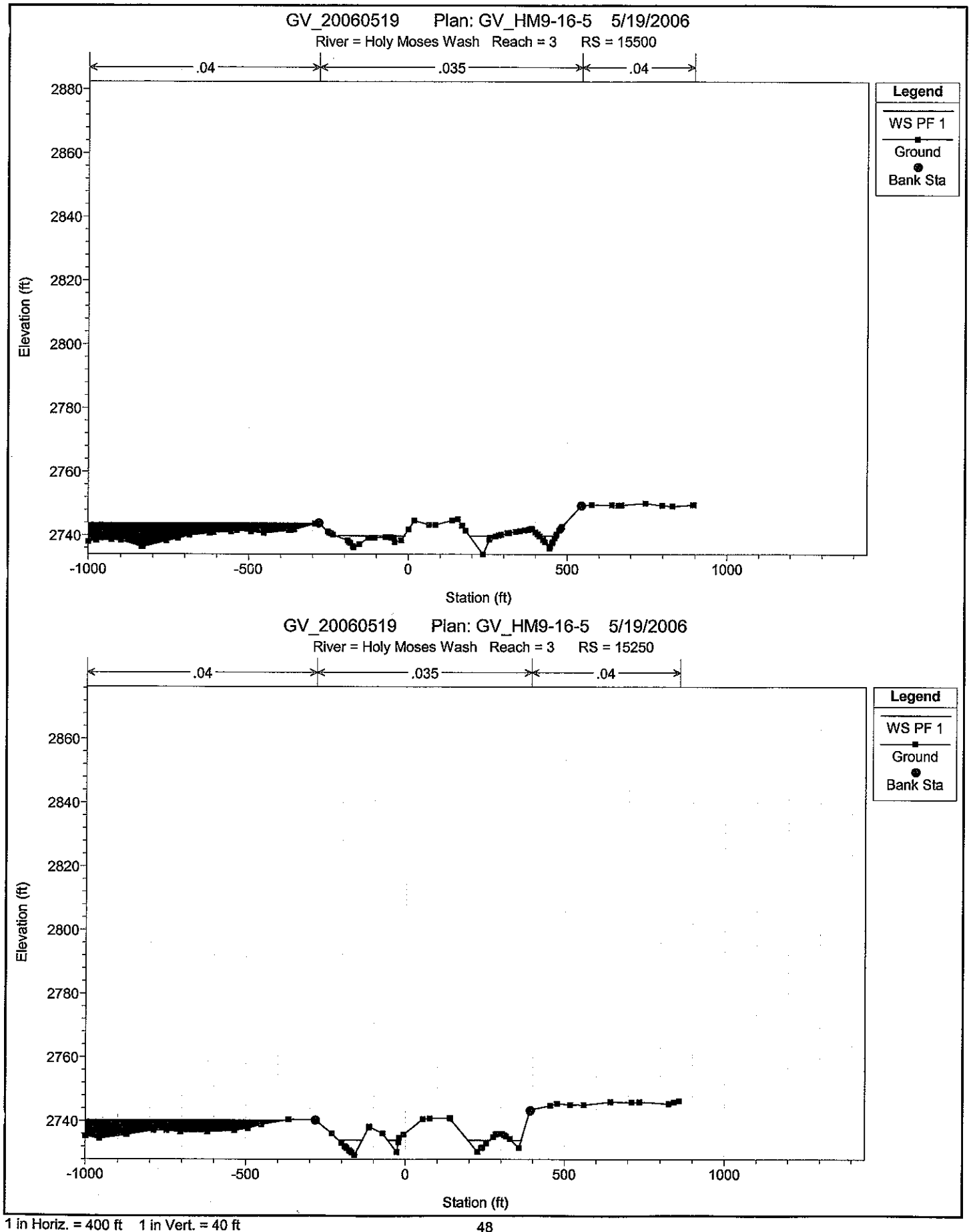


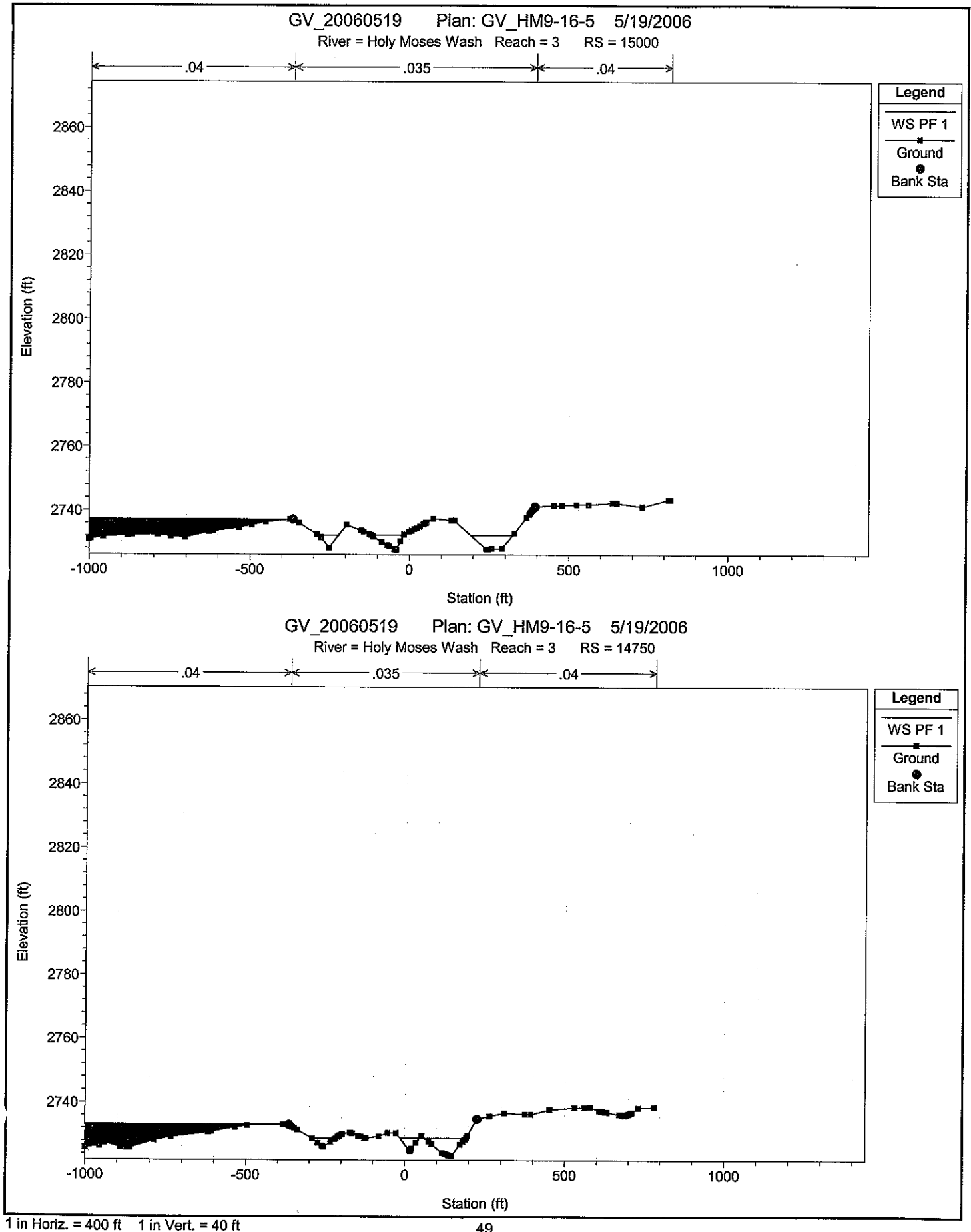


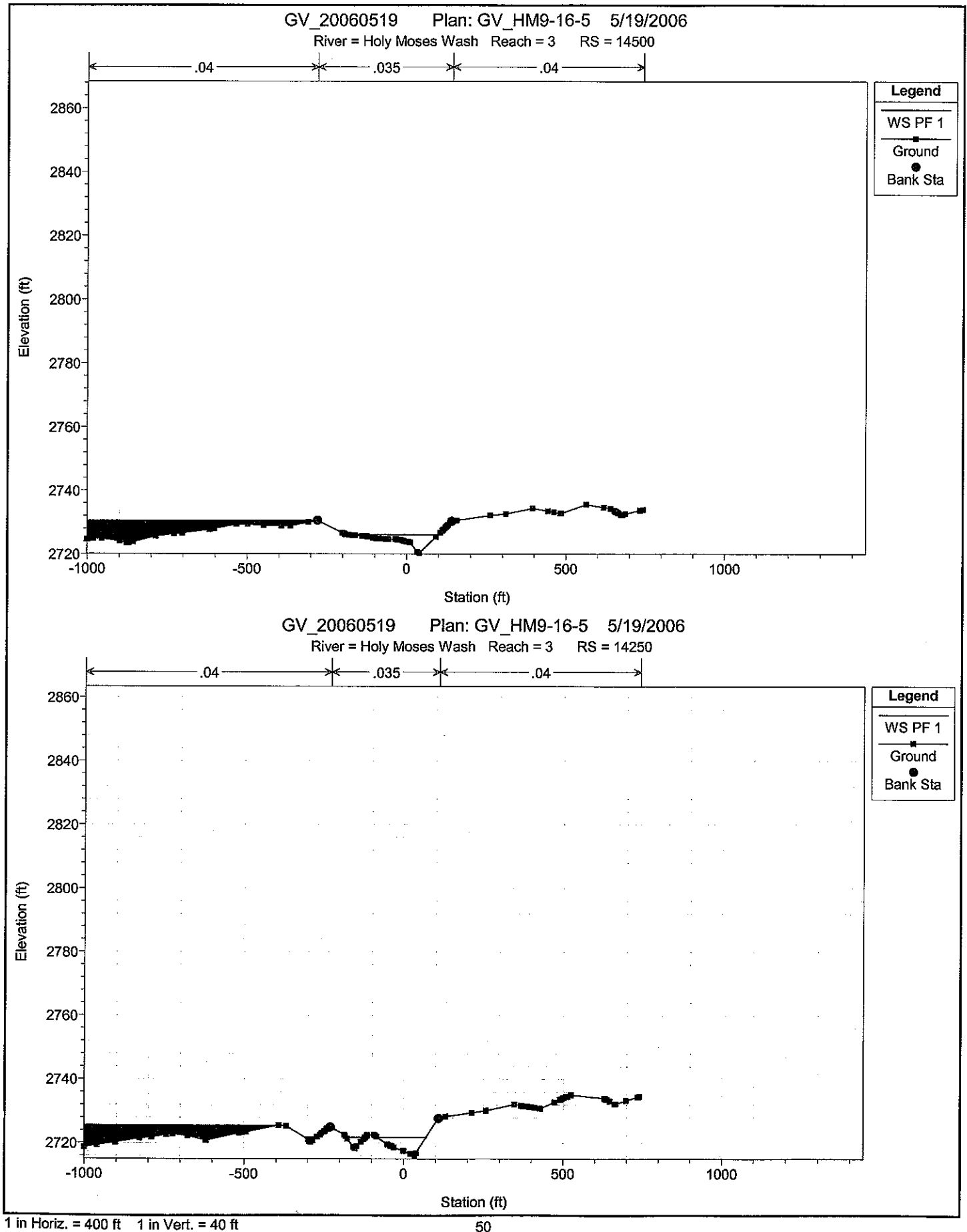


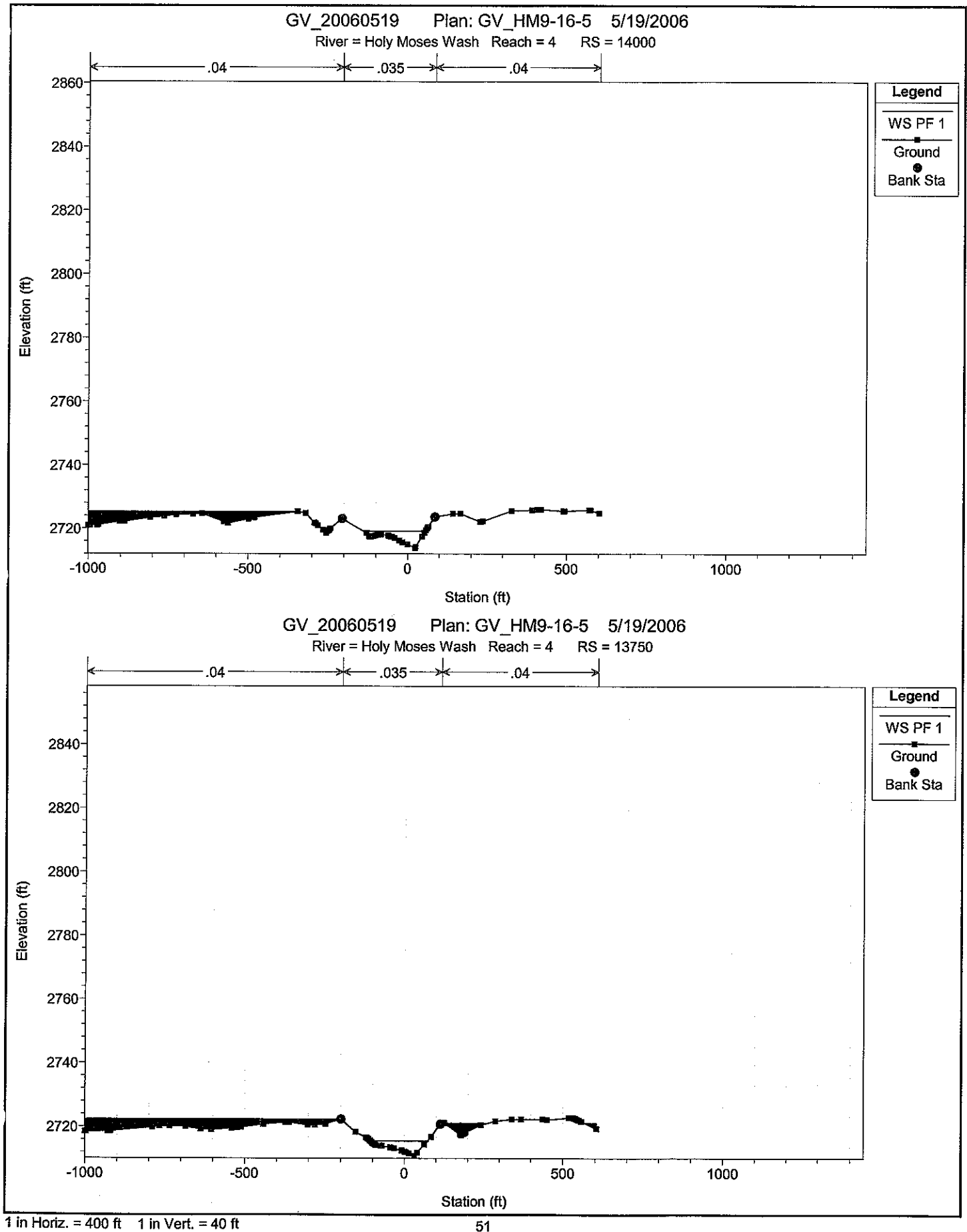


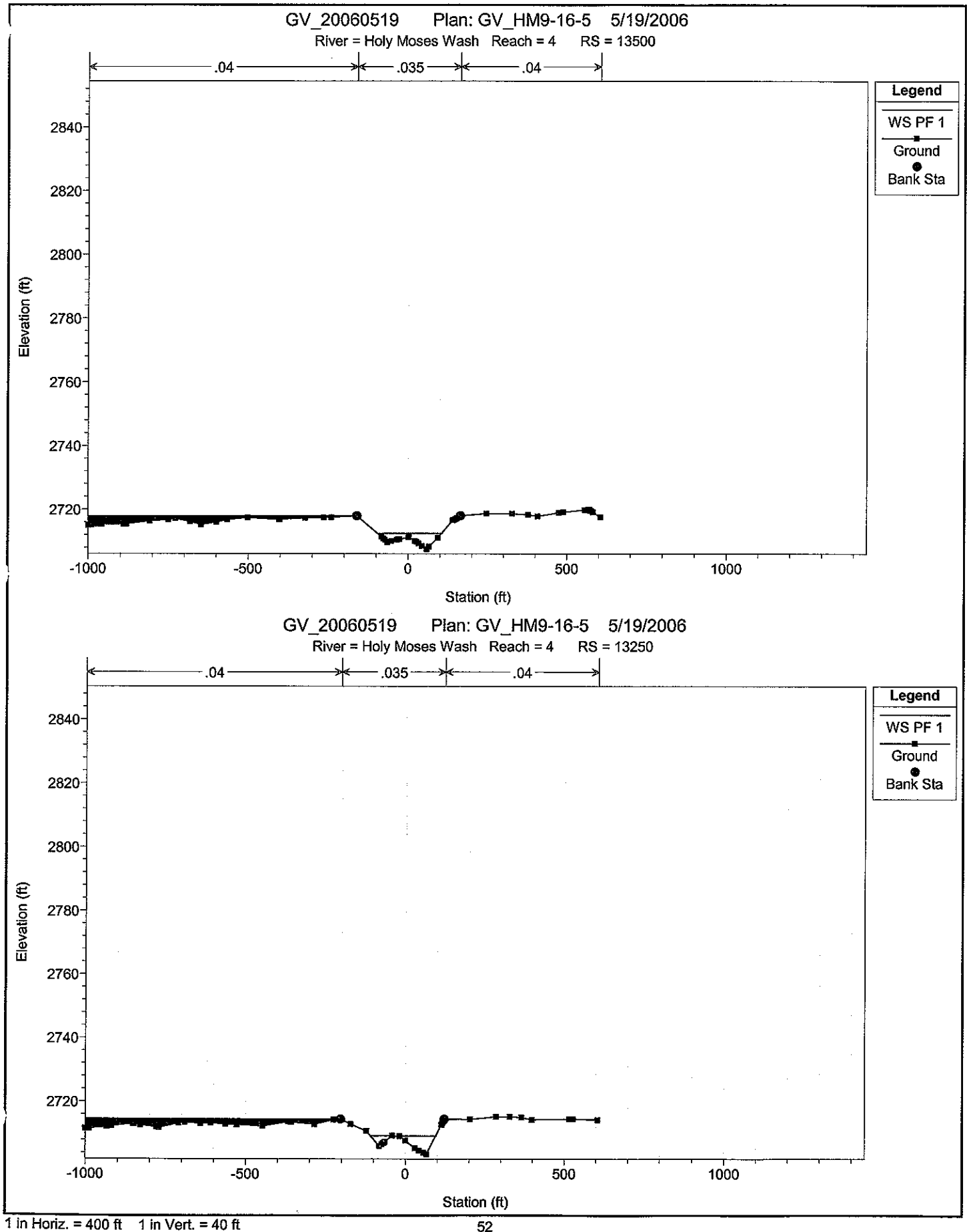


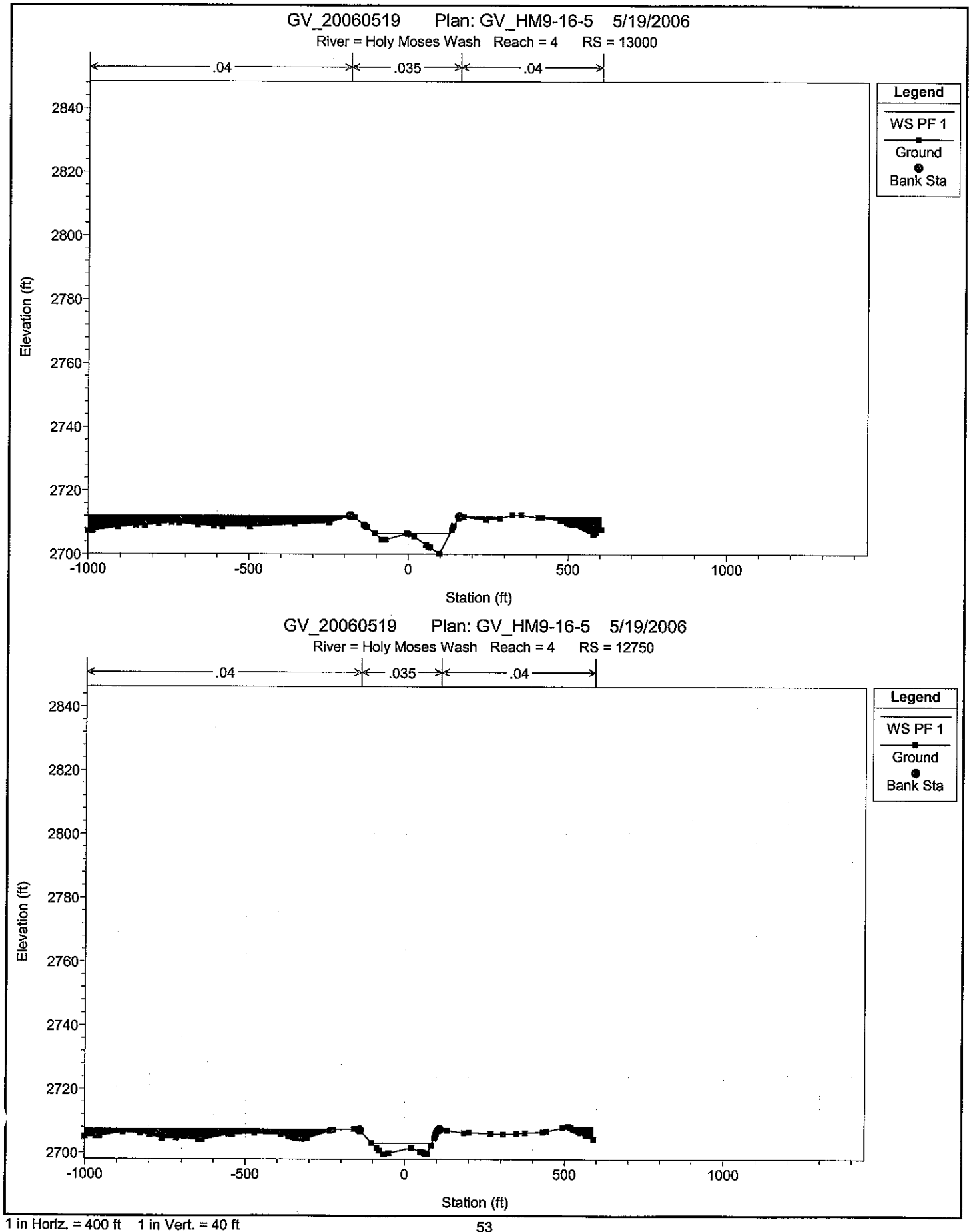


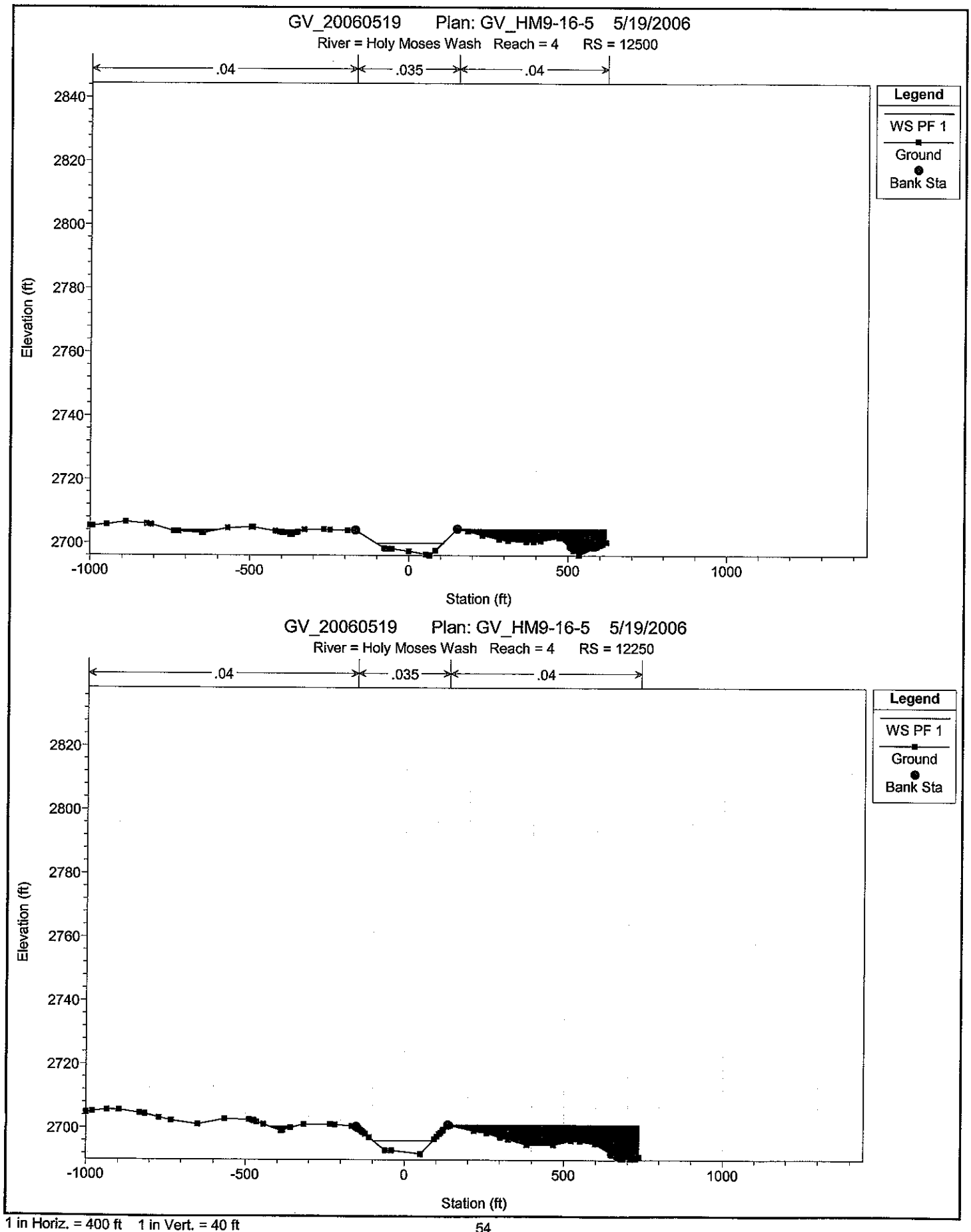


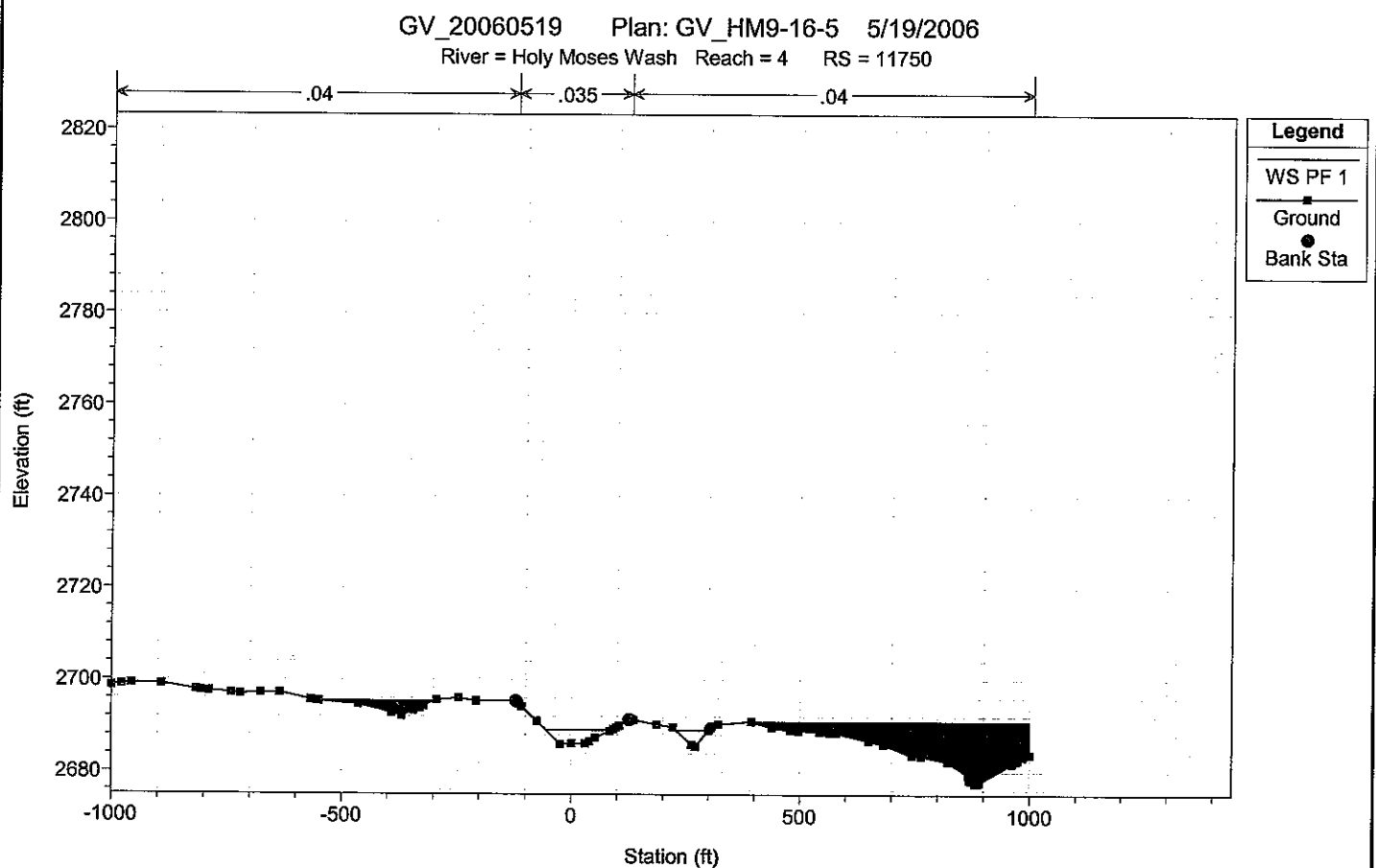
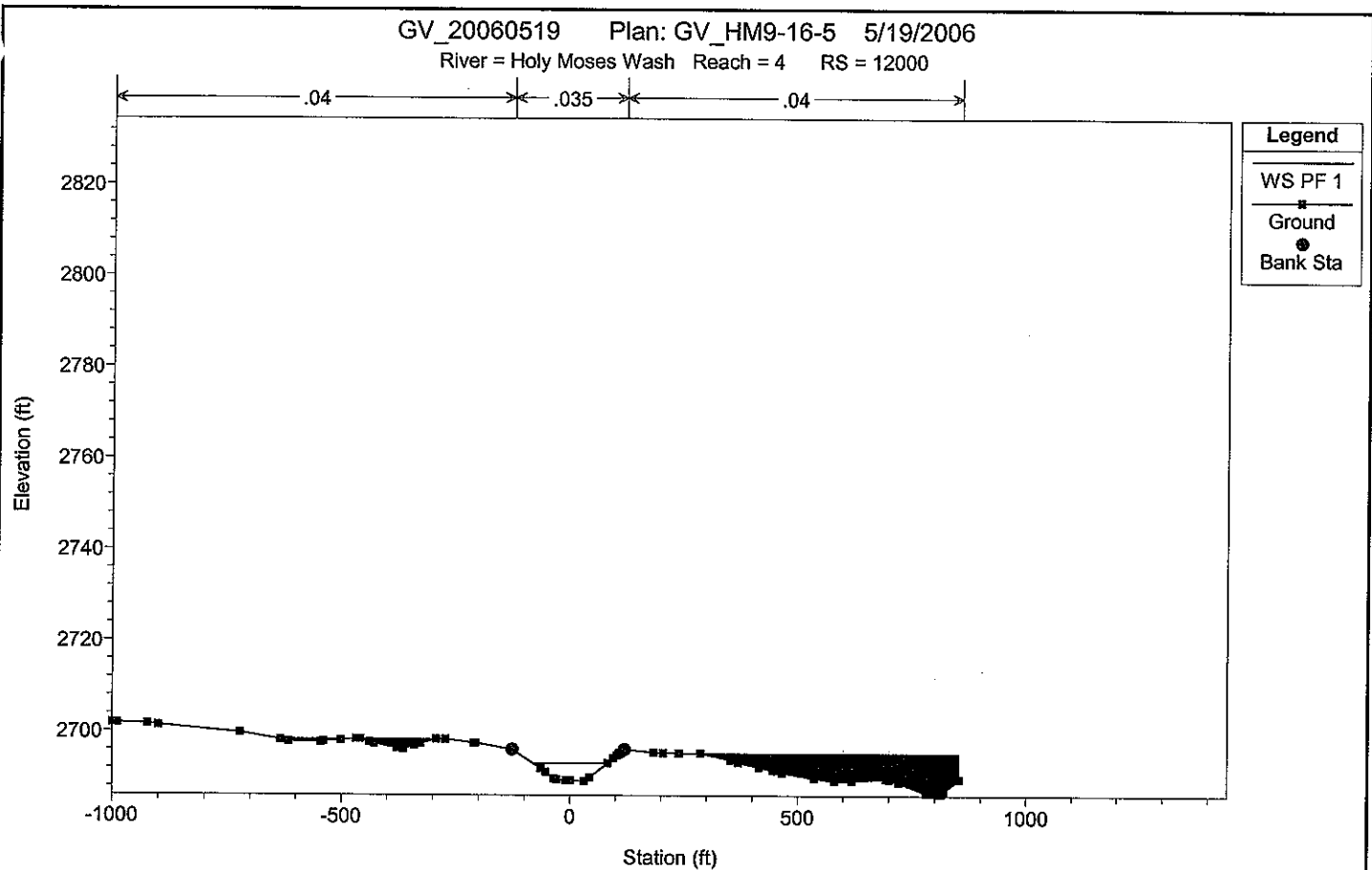




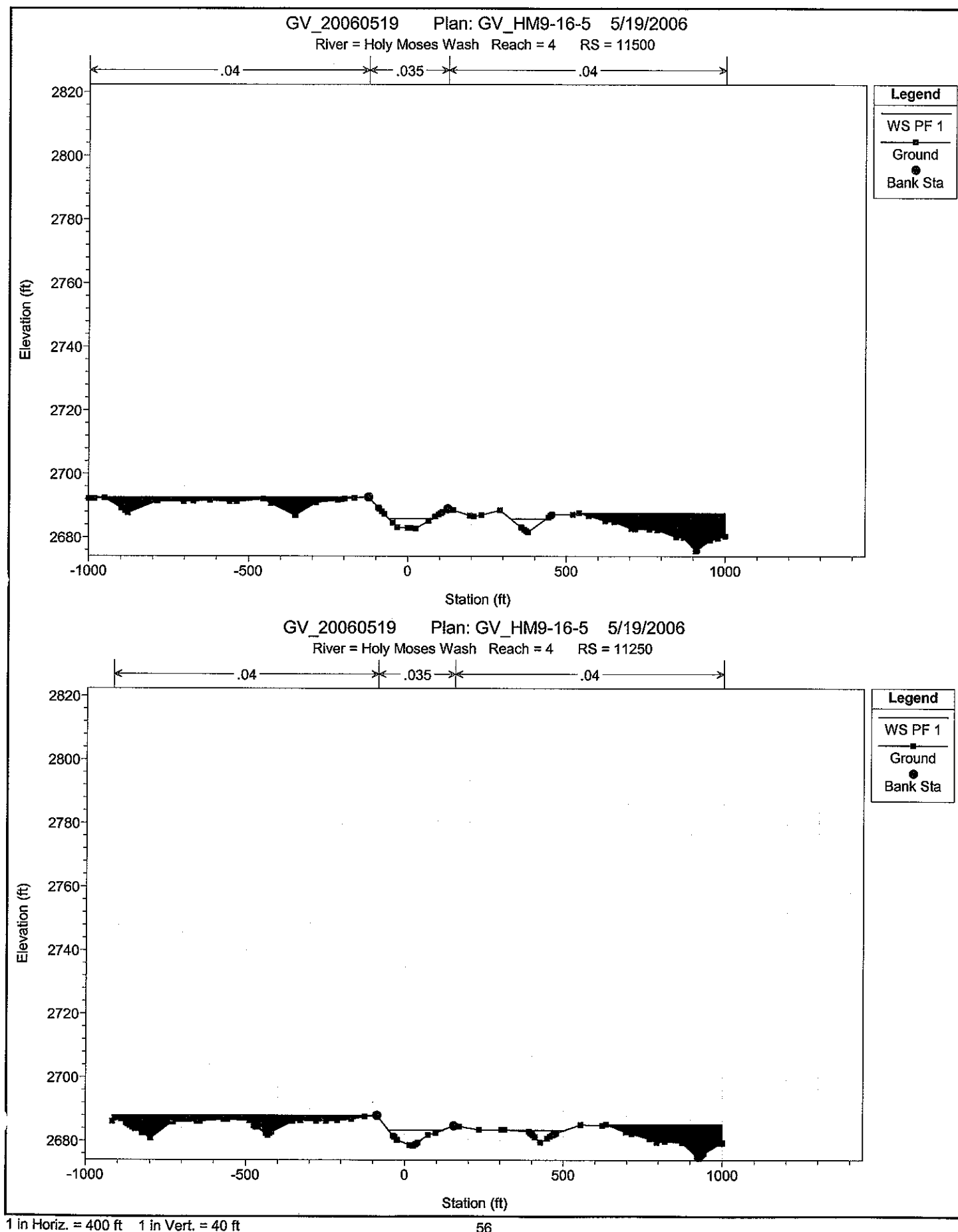


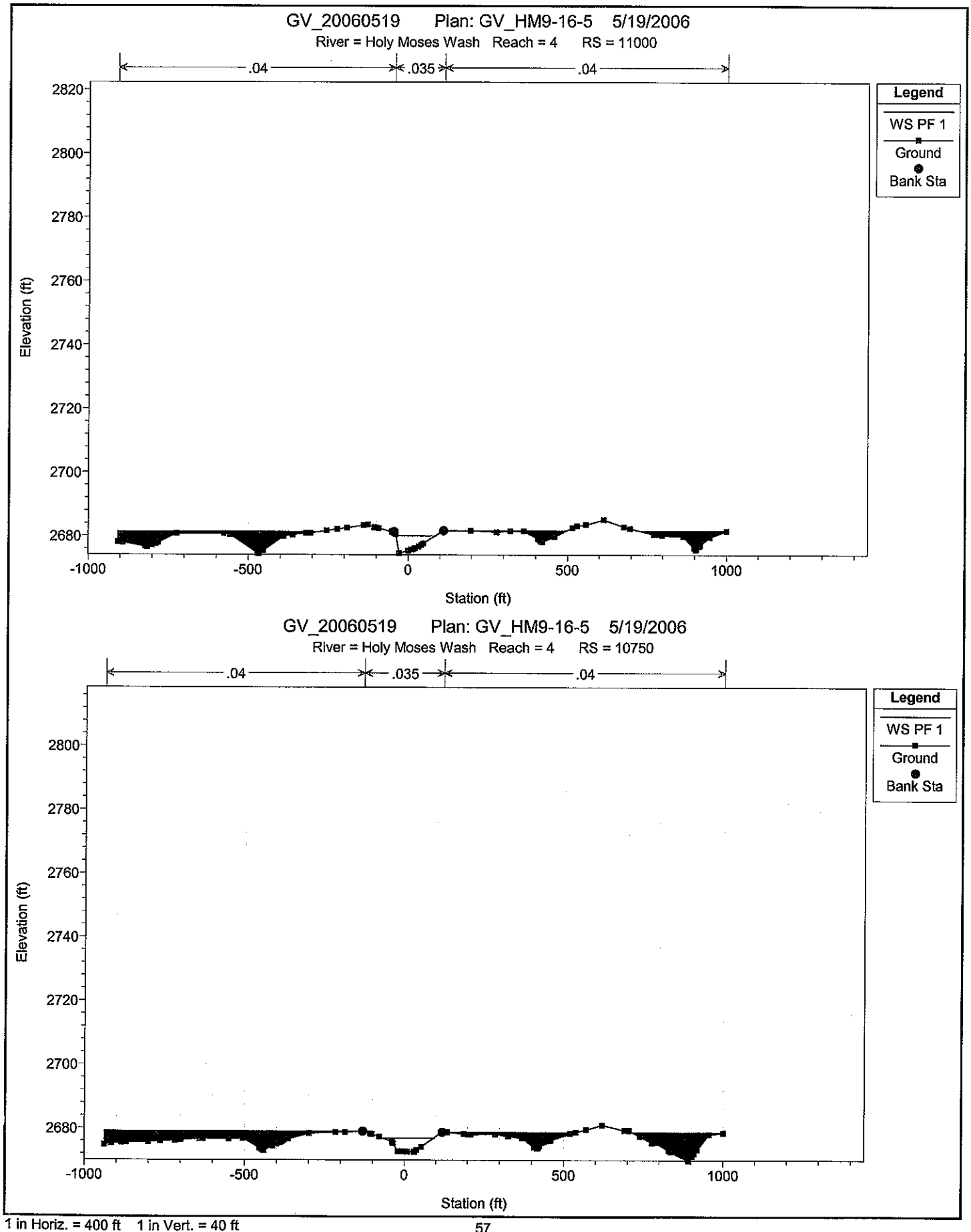


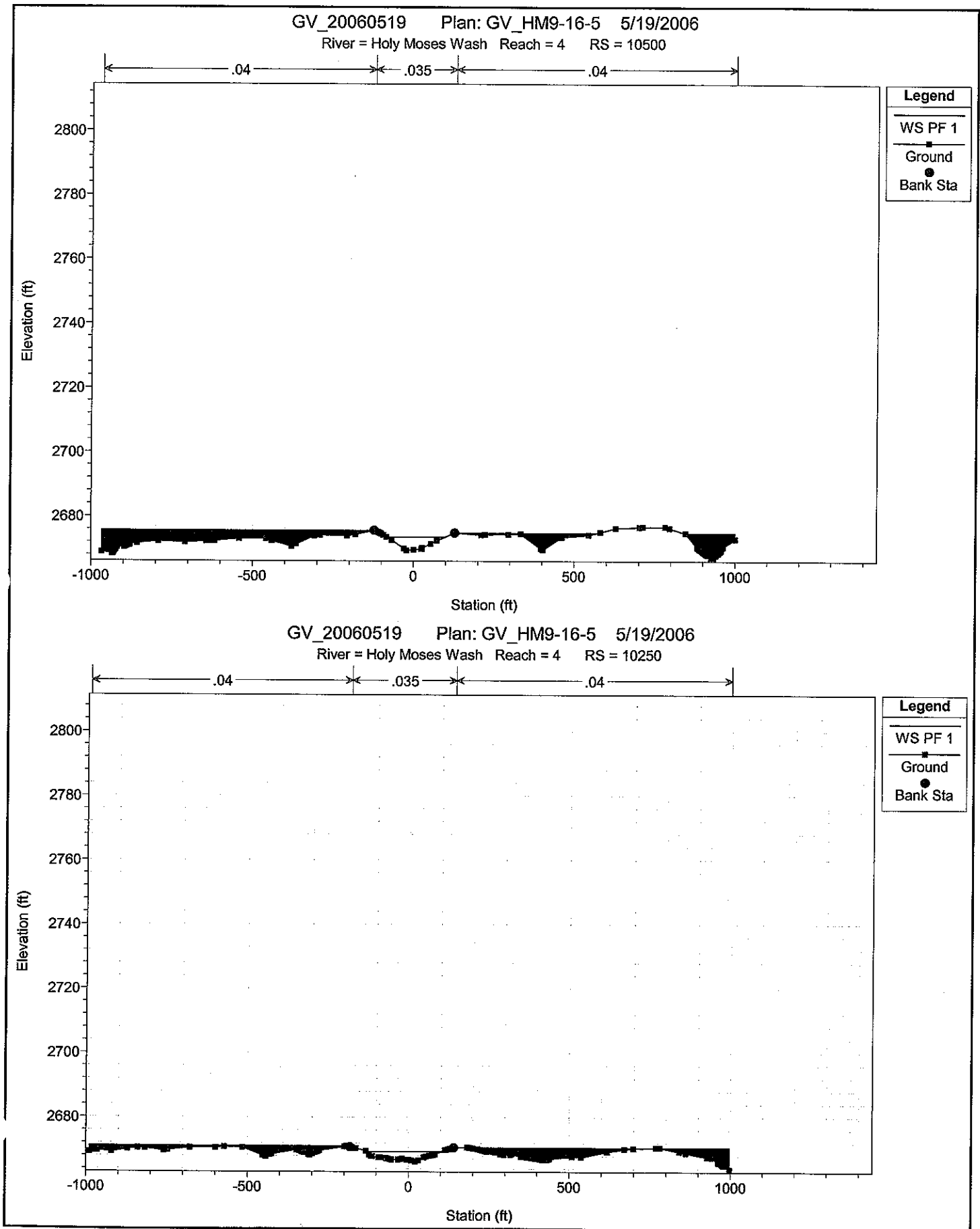




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Golden Valley Ranch Technical Drainage Study

HEC-RAS Plan: Imported Pla River: RIVER-1 Reach: Reach-1 Profile: PF 1									
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft/s)	(sq ft)	(ft)	
Reach-1	213 PF 1		111	2668.6	2669.29	2.08	37.6	67.1	0.62
Reach-1	212 PF 1		111	2667.5	2667.65	1.11	28.76	62.49	0.72
Reach-1	211 PF 1		111	2665.4	2666.14	3.52	29.47	71.39	1.01
Reach-1	210 PF 1		111	2664.39	2664.37		21.58	44.02	0
Reach-1	209 PF 1		111	2663.33	2663.53	3.79	18.28	93.8	2.01
Reach-1	208 PF 1		111	2661.22	2661.87	3.29	33.39	101.93	1.02
Reach-1	207 PF 1		111	2660	2660.41	2.71	35.34	133.32	1.02
Reach-1	206 PF 1		111	2658.7	2658.8	0.71	34.75	97.82	0.55
Reach-1	205 PF 1		111	2656.8	2656.59		25.43	42.26	0
Reach-1	204 PF 1		111	2655.36	2655.8	1.83	35.35	175.28	0.9
Reach-1	203 PF 1		111	2653.57	2653.81	2.13	22.79	76.97	1.09
Reach-1	202 PF 1		111	2652.52	2652.95	1.38	40.83	149.61	0.69
Reach-1	201 PF 1		111	2650.9	2651.05	1.17	31.72	89.59	0.76
Reach-1	200 PF 1		111	2648.63	2649.73	1.82	57.3	109.33	0.46
Reach-1	199 PF 1		111	2648.35	2649.25	3.18	38.79	99.26	0.81
Reach-1	198 PF 1		111	2645.8	2647.69	3.63	27.17	51.73	0.96
Reach-1	197 PF 1		111	2644.96	2646.04	0.83	26.22	64.51	0.74
Reach-1	196 PF 1		111	2643.08	2644.84	1.07	24.98	43.62	0.71
Reach-1	195 PF 1		111	2641.96	2643.34	2.75	20.33	34.84	1.02
Reach-1	194 PF 1		111	2640.4	2641.79	5.28	21.49	31.91	1.11
Reach-1	193 PF 1		111	2639.47	2640.75	4.78	23.05	35.51	1.05
Reach-1	192 PF 1		111	2638.38	2640.07	3.38	32.52	56.13	0.79
Reach-1	191 PF 1		111	2638.17	2638.18	0.12	24.2	36.39	0.4
Reach-1	190 PF 1		111	2635.7	2636.66	6.42	17.28	35.98	1.63
Reach-1	189 PF 1		111	2635.03	2635.05	0.26	28.75	46.35	0.44
Reach-1	188 PF 1		111	2633.42	2634.12	3.03	28.06	55.78	0.9
Reach-1	187 PF 1		111	2632.57	2632.89	2.18	32.16	105.99	0.97
Reach-1	186 PF 1		111	2631.7	2631.85	1.22	39.62	158.38	0.79
Reach-1	185 PF 1		111	2630.05	2630.29	0.02	1044.37	511.13	0.01
Reach-1	184 PF 1		111	2629.27	2629.11		898.33	480.04	0
Reach-1	183 PF 1		111	2627.82	2628.04	7.84	14.02	136	4.33
Reach-1	182 PF 1		111	2626.7	2627.09	2.65	42.42	206.25	1.02
Reach-1	181 PF 1		111	2625.29	2625.73	2.49	45.55	190.9	0.88
Reach-1	180 PF 1		111	2624.1	2624.48	2.45	44.72	209.91	0.94
Reach-1	179 PF 1		111	2622.51	2623.03	2.92	37.96	147.52	1.02
Reach-1	178 PF 1		111	2621.43	2621.01		310.24	256.2	0
Reach-1	177 PF 1		111	2620.59	2620.12		370.96	502.77	0
Reach-1	176 PF 1		111	2619.12	2618.55		11.62	118.24	0
Reach-1	175 PF 1		111	2617.6	2617.43		295.26	414.49	0
Reach-1	174 PF 1		111	2616.71	2616.7		544.02	503.93	0
Reach-1	173 PF 1		111	2614.7	2614.93	1.73	56.27	434.26	0.9
Reach-1	172 PF 1		111	2613.41	2614.11	0.36	130.03	672.84	0.26
Reach-1	171 PF 1		111	2612.24	2612.83	6.61	16.92	238.1	4.34
Reach-1	170 PF 1		111	2611.75	2612	1.71	45.83	237.6	0.86
Reach-1	169 PF 1		111	2610.16	2610.53	2.35	47.22	270.68	0.99
Reach-1	168 PF 1		111	2608.6	2608.9	2.64	42.12	370.84	1.38
Reach-1	167 PF 1		111	2606.95	2607.48	2.99	37.14	130.23	0.99
Reach-1	166 PF 1		111	2605.67	2606.16	2.87	39.25	150.87	0.98
Reach-1	165 PF 1		111	2603.52	2605.51	0.06	549.62	520.9	0.02

**Golden Valley Ranch
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HEC-RAS Plan: Imported Pla River: RIVER-1 Reach: Reach-1 Profile: PF 1									
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Vel Chnl	Flow Area	Top Width	Froude # Chl
Reach-1	164 PF 1	111	2602.61	2603.82	10.15	11.24	42.66	3.4	
Reach-1	163 PF 1	111	2599.38	2602.33	0.18	624.87	532.46	0.03	
Reach-1	162 PF 1	111	2597.74	2600.69	0.21	531.59	405.8	0.03	
Reach-1	161 PF 1	111	2597.03	2599.46	8.49	13.08	215.65	6.07	
Reach-1	160 PF 1	111	2596.12	2598.12	1.55	71.58	264.79	0.52	
Reach-1	159 PF 1	111	2596.45	2597.41	2.4	47.88	281.59	0.93	
Reach-1	158 PF 1	111	2593.2	2595.74	0.25	442.03	508.11	0.05	
Reach-1	157 PF 1	111	2592.12	2594.65	3.44	33.01	94.89	1.01	
Reach-1	156 PF 1	111	2590.9	2593.68	1.92	47.85	92.31	0.54	
Reach-1	155 PF 1	111	2591.14	2592.31	2.42	33.82	100.35	0.91	
Reach-1	154 PF 1	111	2589.5	2590.87		36.12	145.65	0	
Reach-1	153 PF 1	111	2587.4	2589.92	2.29	37.32	103.25	0.79	
Reach-1	152 PF 1	111	2586.67	2587.63	4	29.37	67.14	1.02	
Reach-1	151 PF 1	111	2584.72	2585.67	5.97	18.27	39.27	1.56	
Reach-1	150 PF 1	111	2583.26	2584.53	5.36	21.56	34.16	1.15	
Reach-1	149 PF 1	111	2581.99	2582.5		14.07	23.23	0	
Reach-1	148 PF 1	111	2579.9	2581.44	2.76	43.27	59.84	0.54	
Reach-1	147 PF 1	111	2579.27	2580.19	4.01	26.9	39.6	0.88	
Reach-1	146 PF 1	111	2578.07	2579.2	4.36	25.89	47.66	1.03	
Reach-1	145 PF 1	111	2576.23	2577.75	1.93	45.7	52.35	0.43	
Reach-1	144 PF 1	111	2575.61	2576.94	4.55	24.01	35.16	0.98	
Reach-1	143 PF 1	111	2575.3	2575.56	1.99	21.67	43.96	0.96	
Reach-1	142 PF 1	111	2572.94	2574.03	8.54	14.73	33.35	2.04	
Reach-1	141 PF 1	111	2571.25	2573.14	4.85	23.74	34.22	1	
Reach-1	140 PF 1	111	2570.41	2572.35	1.24	39.54	45.71	0.42	
Reach-1	139 PF 1	111	2570.46	2571.64	4.17	23.11	32.25	0.96	
Reach-1	138 PF 1	111	2567.98	2570.63	6.4	17.34	26.86	1.4	
Reach-1	137 PF 1	111	2567.48	2569.51	4.87	25.96	50.49	0.98	
Reach-1	136 PF 1	111	2566.92	2568.85	3.55	30.9	47.5	0.78	
Reach-1	135 PF 1	111	2566.33	2567.61	3.63	32.86	48.16	0.73	
Reach-1	134 PF 1	111	2565.87	2566.12	1.6	31.04	76.44	0.79	
Reach-1	133 PF 1	111	2564.91	2564.85		54.57	44.77	0	
Reach-1	132 PF 1	111	2563.7	2564.48	3.33	31.89	82.45	0.95	
Reach-1	131 PF 1	111	2561.4	2562.38	6.97	18.04	54.22	1.92	
Reach-1	130 PF 1	111	2560.4	2561.41	3.09	33.13	70.33	0.84	
Reach-1	129 PF 1	111	2558.44	2560.06	5.21	22.16	27.95	1	
Reach-1	128 PF 1	111	2558.14	2559.1	1.58	43.97	47.36	0.4	
Reach-1	127 PF 1	111	2556.93	2558.02	4.32	24.2	35.69	0.96	
Reach-1	126 PF 1	111	2556.45	2557.53	2.98	40.63	62.9	0.61	
Reach-1	125 PF 1	111	2555.89	2556.46	2.93	31.93	87.29	0.96	
Reach-1	124 PF 1	111	2554.52	2555.5	1.76	64.57	117.53	0.41	
Reach-1	123 PF 1	111	2554.09	2554.11	0.26	26.56	49.2	0.5	
Reach-1	122 PF 1	111	2554.18	2553.54		54.07	81.6	0	
Reach-1	121 PF 1	111	2552.59	2553.04	2.73	37.62	137.84	0.97	
Reach-1	120 PF 1	111	2551.8	2552.25	1.34	54.72	132.99	0.48	
Reach-1	119 PF 1	111	2550.8	2551.57	3.01	37.18	136.19	1.01	
Reach-1	118 PF 1	111	2549.9	2550.17	3.22	26.12	131.75	1.54	
Reach-1	117 PF 1	111	2548.51	2549.2	2.54	44.58	233.1	1	
Reach-1	116 PF 1	111	2547.17	2548.43	0.76	32.91	94.03	0.67	
Reach-1	115 PF 1	111	2545.7	2547.29	0.3	373.83	529.14	0.06	

**Golden Valley Ranch
Technical Drainage Study**

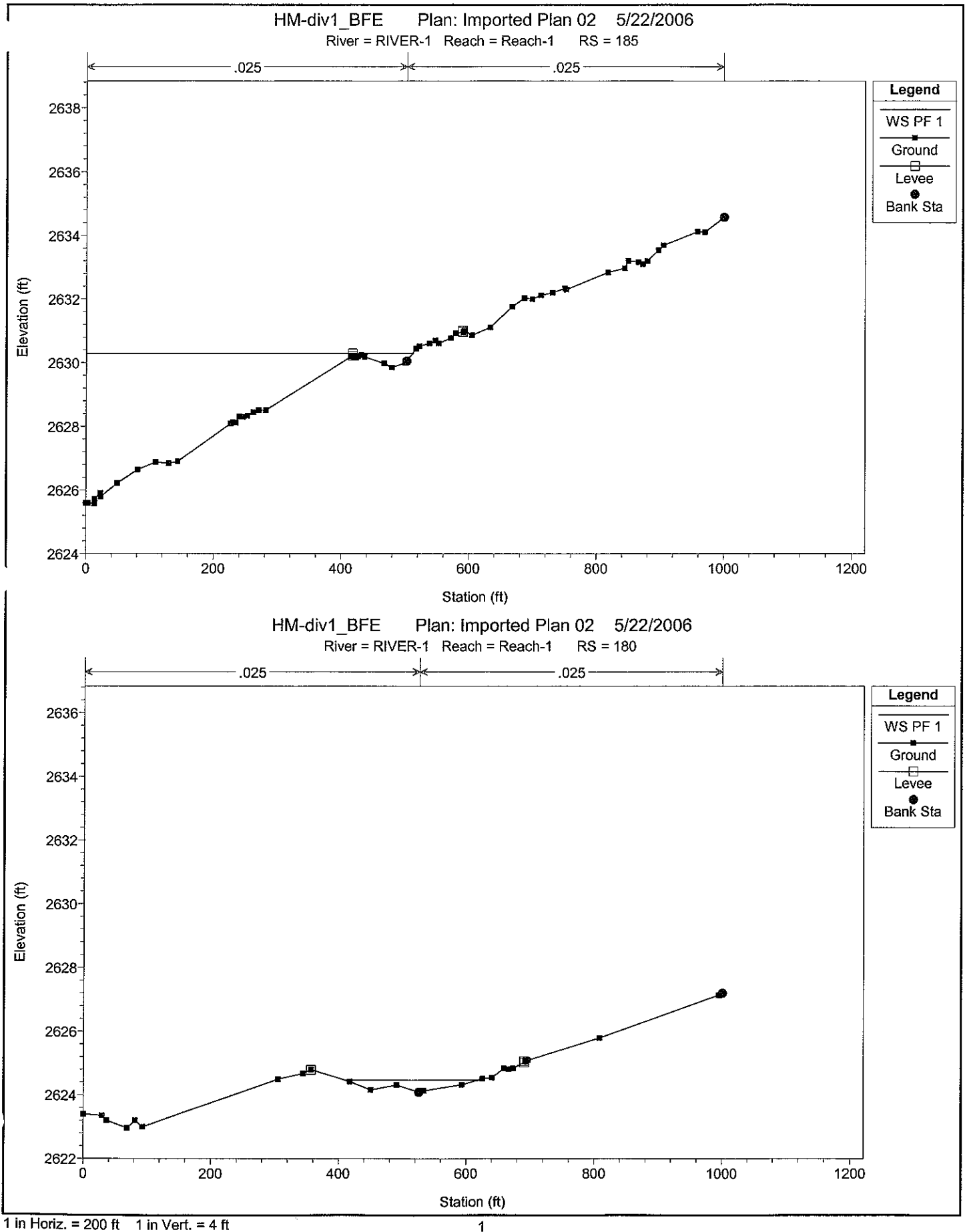
HEC-RAS Plan: Imported Pla River: RIVER-1 Reach: Reach-1 Profile: PF 1									
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Vel Chnl	Flow Area	Top Width	Froude # Chl
Reach-1	114 PF 1	111	2544.4	2546.28	0.19	602.9	581.74	0.03	
Reach-1	113 PF 1	111	2543.49	2544.94		12.51	125.53	0	
Reach-1	112 PF 1	111	2542.1	2543.61	0.57	203.91	416.38	0.13	
Reach-1	111 PF 1	111	2541.49	2541.86	9.87	11.25	74.48	4.48	
Reach-1	110 PF 1	111	2540.1	2540.67	2.04	55.11	141.64	0.57	
Reach-1	109 PF 1	111	2539.14	2539.76	3.5	32.28	89.68	1.01	
Reach-1	108 PF 1	111	2538.2	2538.89	3.14	32.36	95.53	1.01	
Reach-1	107 PF 1	111	2536.81	2537.78	2.24	41.76	99.9	0.68	
Reach-1	106 PF 1	111	2535.86	2536.58	1.88	44.26	86.13	0.55	
Reach-1	105 PF 1	111	2535.35	2535.9	2.38	33.28	90.07	0.85	
Reach-1	104 PF 1	111	2534.75	2535.15	1.56	50.68	129.58	0.54	
Reach-1	103 PF 1	111	2534	2534.42	2.61	42.65	190.43	0.97	
Reach-1	102 PF 1	111	2532.2	2532.74	2.29	49.35	149.02	0.69	
Reach-1	101 PF 1	111	2531.57	2532	2.43	42.14	181.68	0.93	
Reach-1	100 PF 1	111	2531	2531.22	0.87	71.52	280.4	0.46	
Reach-1	99 PF 1	111	2529.46	2529.99	2.96	36.1	120.97	0.98	
Reach-1	98 PF 1	111	2528.75	2529.06	0.41	172.66	533.65	0.18	
Reach-1	97 PF 1	111	2526.4	2527.77	7.73	14.36	57.56	2.73	
Reach-1	96 PF 1	111	2524.8	2526.93	0.2	557.46	471.79	0.03	
Reach-1	95 PF 1	111	2523.46	2525.99	0.17	653.46	432.15	0.02	
Reach-1	94 PF 1	111	2522.24	2524.96		14.31	67.07	0	
Reach-1	93 PF 1	111	2520.7	2523.55	0.17	663.46	402.71	0.02	
Reach-1	92 PF 1	111	2519.5	2523.55	0.12	964.25	566.84	0.01	
Reach-1	91 PF 1	111	2519.05	2521.9	9.77	11.27	75.43	4.48	
Reach-1	90 PF 1	111	2518.26	2520.78	0.26	429.78	473.93	0.05	
Reach-1	89 PF 1	111	2518.3	2519.46	8.78	12.73	92.32	4.14	
Reach-1	88 PF 1	111	2516.92	2518.52	1.18	74.7	209.78	0.4	
Reach-1	87 PF 1	111	2513.83	2517.71		38.34	152.55	0	
Reach-1	86 PF 1	111	2512.36	2516.33	0.14	773.82	532.91	0.02	
Reach-1	85 PF 1	111	2512.3	2514.61	10.04	11.06	121.68	5.87	
Reach-1	84 PF 1	111	2511.2	2513.22	1.83	60.78	182.22	0.56	
Reach-1	83 PF 1	111	2510.08	2513.25	0.19	608.17	580.56	0.03	
Reach-1	82 PF 1	111	2510.34	2511.78	2.47	44.98	242.5	1.01	
Reach-1	81 PF 1	111	2509.07	2510.67	0.52	211.56	388.94	0.13	
Reach-1	80 PF 1	111	2507.88	2509.29	7.46	12.79	153.94	4.65	
Reach-1	79 PF 1	111	2505.48	2507.79	0.25	448.42	514.75	0.05	
Reach-1	78 PF 1	111	2504.29	2506.68	8.04	13.81	77.81	3.36	
Reach-1	77 PF 1	111	2502.72	2506.08	2.73	41.61	117.78	0.79	
Reach-1	76 PF 1	111	2501.32	2505.07	2.99	38.19	136.89	0.96	
Reach-1	75 PF 1	111	2500.9	2503.77	1.75	43.22	204.95	0.88	
Reach-1	74 PF 1	111	2500.05	2502.19	3.66	27.62	279.21	2.18	
Reach-1	73 PF 1	111	2499.41	2501.03	2.55	43.51	214.65	1	
Reach-1	72 PF 1	111	2497.77	2500.33		48.68	119.34	0	
Reach-1	71 PF 1	111	2496.18	2499.5	3.25	34.29	104.11	0.99	
Reach-1	70 PF 1	111	2495.3	2498.55	0.17	665.33	410.04	0.02	
Reach-1	69 PF 1	111	2494	2497.78	0.17	654.43	423.14	0.02	
Reach-1	68 PF 1	111	2492.99	2496.88	4.37	16.35	117.11	2.69	
Reach-1	67 PF 1	111	2493.36	2496.05	0.83	51.59	143.71	0.48	
Reach-1	66 PF 1	111	2491.74	2495.27	1.66	35.43	110.83	0.79	
Reach-1	65 PF 1	111	2491.84	2494.56	1.76	51.74	163.62	0.63	

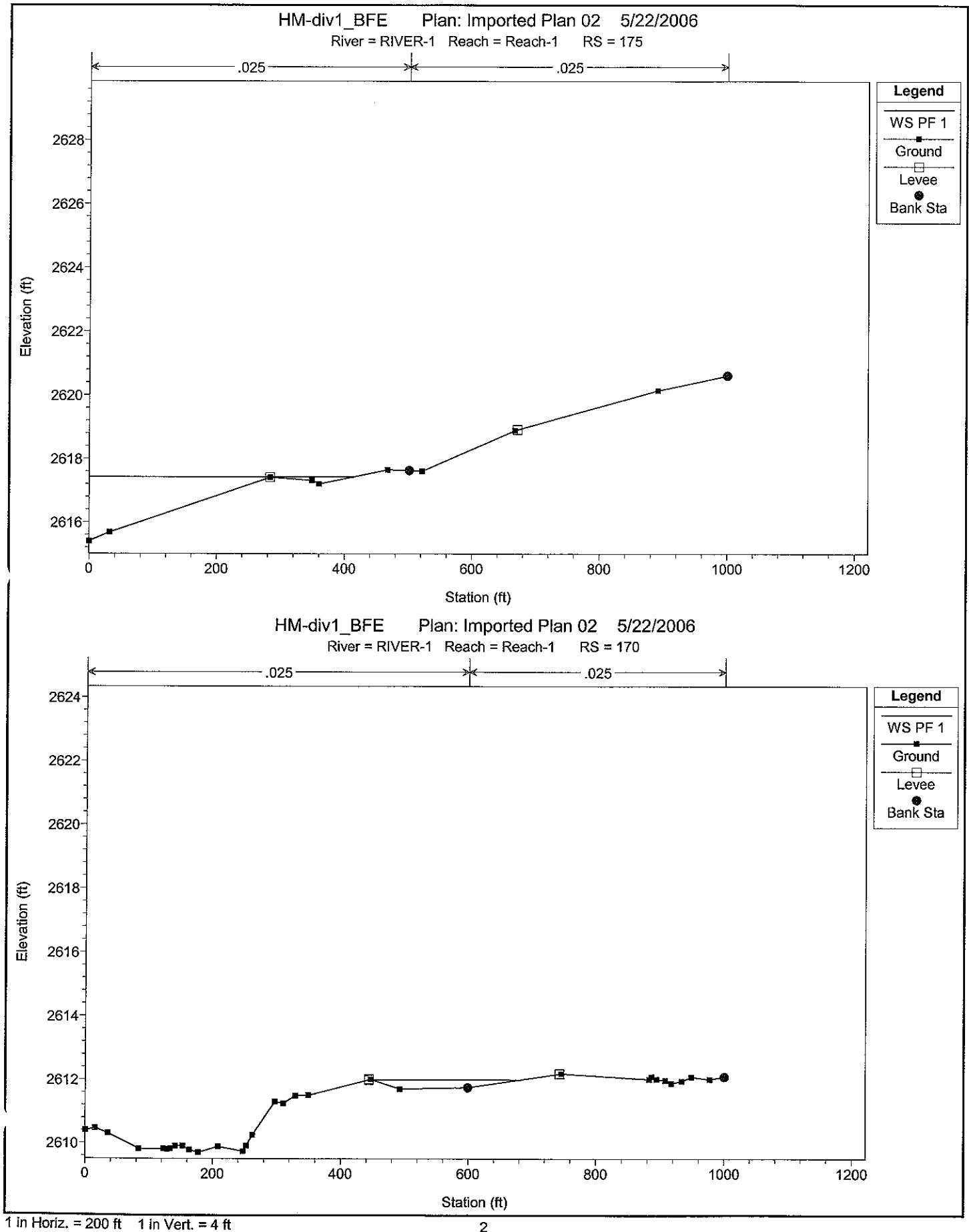
**Golden Valley Ranch
Technical Drainage Study**

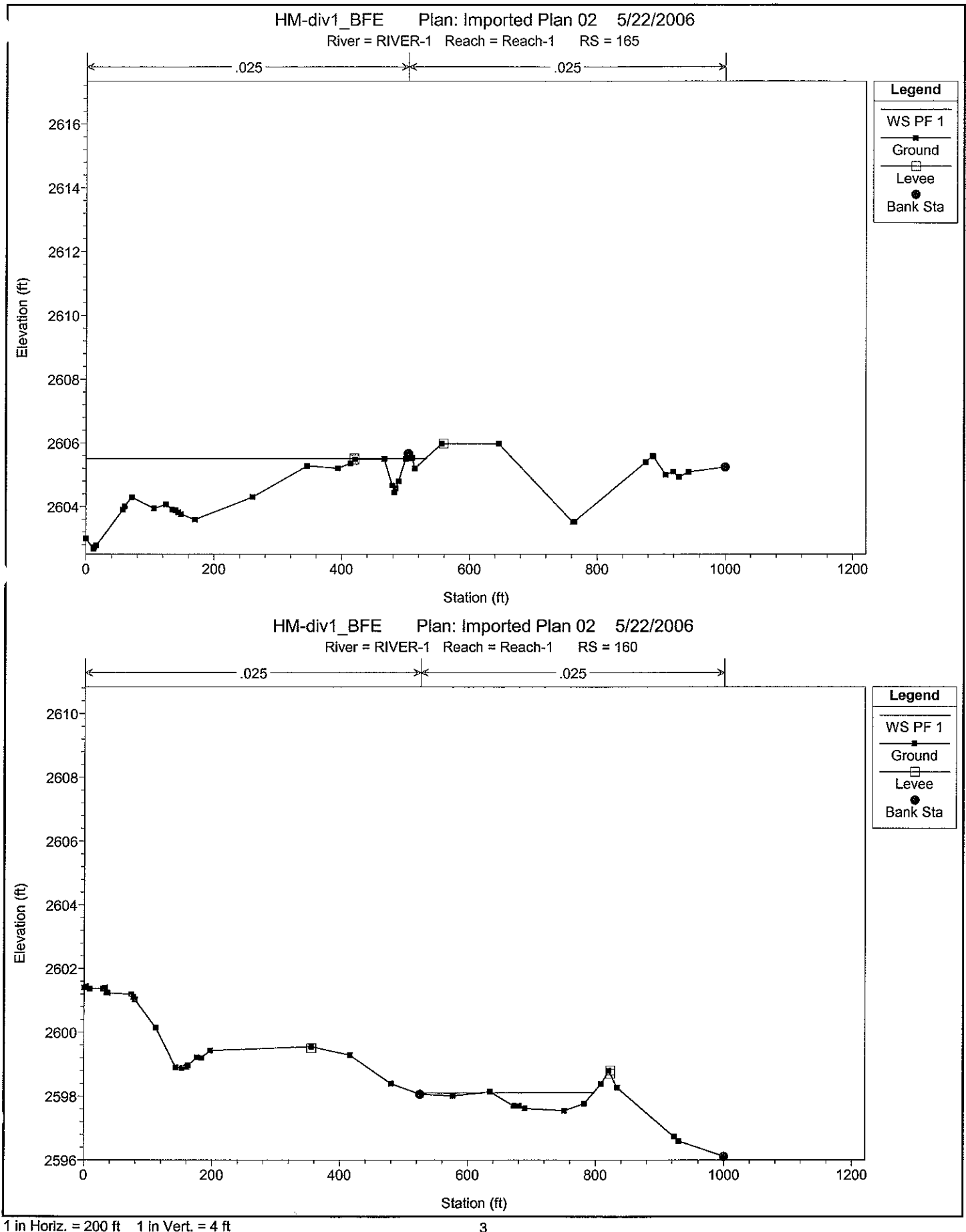
HEC-RAS Plan: Imported Pla River: RIVER-1 Reach: Reach-1 Profile: PF 1									
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Vel Chnl	Flow Area	Top Width	Froude # Chl
Reach-1	64 PF 1	111	2491.65	2493.64	1.1	49.9	145.37	0.53	
Reach-1	63 PF 1	111	2491.72	2492.07		42.67	209	0	
Reach-1	62 PF 1	111	2489.95	2490.84	2.81	45.64	148.22	0.79	
Reach-1	61 PF 1	111	2486	2490.08	1.56	55.69	187.6	0.6	
Reach-1	60 PF 1	111	2485.63	2489.19	1	36.76	125.87	0.72	
Reach-1	59 PF 1	111	2485	2488.7	0.19	597.85	568.19	0.03	
Reach-1	58 PF 1	111	2484.92	2487.19	4.31	11.86	114.84	4.17	
Reach-1	57 PF 1	111	2484.02	2485.99	2.89	38.63	153.89	1	
Reach-1	56 PF 1	111	2483.24	2484.8	1.81	61.78	151.57	0.5	
Reach-1	55 PF 1	111	2482.45	2483.92	1.16	31.72	83.48	0.7	
Reach-1	54 PF 1	111	2480.1	2482.18	5.5	20.98	100.76	2.05	
Reach-1	53 PF 1	111	2479.27	2481.47	3.04	36.4	131.18	1.02	
Reach-1	52 PF 1	111	2478.6	2480.71	1.55	54.71	146.69	0.54	
Reach-1	51 PF 1	111	2478.21	2479.04	2.13	31.74	109.84	0.92	
Reach-1	50 PF 1	111	2476.66	2478.09	1.29	39.92	159.06	0.74	
Reach-1	49 PF 1	111	2475.28	2477.12	0.39	296.51	596.66	0.09	
Reach-1	48 PF 1	111	2469.72	2475.37	9.14	11.1	43.42	3.4	
Reach-1	47 PF 1	111	2467.84	2474.18	4.4	25.03	43.49	1.03	
Reach-1	46 PF 1	111	2466.59	2472.29	7.63	15.87	34.74	1.85	
Reach-1	45 PF 1	111	2465.8	2471.16	4.15	26.83	49.16	0.99	
Reach-1	44 PF 1	111	2464.11	2468.96	3.31	11.48	25.86	1.9	
Reach-1	43 PF 1	111	2464.18	2467.98		23.77	34.29	0	
Reach-1	42 PF 1	111	2464.1	2465.6	4.5	26.87	55.85	1.07	
Reach-1	41 PF 1	111	2462.15	2462.91	6.73	16.48	56.41	2.2	
Reach-1	40 PF 1	111	2461.76	2462.67	3.44	32.69	92.82	1.01	
Reach-1	39 PF 1	111	2460.7	2461.59	1.68	61.18	112.83	0.42	
Reach-1	38 PF 1	111	2460.2	2461.04	2.31	39.11	78.49	0.65	
Reach-1	37 PF 1	111	2459.7	2460.37	2.19	37.36	100.46	0.76	
Reach-1	36 PF 1	111	2459.4	2459.31		28.07	58.03	0	
Reach-1	35 PF 1	111	2458.21	2458.77	1.55	45.75	112.76	0.53	
Reach-1	34 PF 1	111	2456.31	2457.88	2.85	36.87	117.16	0.89	
Reach-1	33 PF 1	111	2456.1	2456.8	3.37	33.86	86.2	0.93	
Reach-1	32 PF 1	111	2456.37	2456.43	0.51	37.72	92.96	0.52	
Reach-1	31 PF 1	111	2454.89	2455.86	2.44	48.1	114.68	0.64	
Reach-1	30 PF 1	111	2454.69	2455.49	1.3	65.17	192.65	0.47	
Reach-1	29 PF 1	111	2453.96	2454.63	2.52	38.4	156.59	0.99	
Reach-1	28 PF 1	111	2453.19	2453.98	3.06	43.89	126	0.71	
Reach-1	27 PF 1	111	2453.06	2453.51	1.6	64.67	241.71	0.57	
Reach-1	26 PF 1	111	2452.64	2452.64		40.88	182.1	0	
Reach-1	25 PF 1	111	2451.82	2452.06	2.3	31.82	176.98	1.21	
Reach-1	24 PF 1	111	2450.77	2451.06	2.4	39.67	170.06	0.98	
Reach-1	23 PF 1	111	2447.7	2450.21	2.55	48.87	151.47	0.71	
Reach-1	22 PF 1	111	2447.2	2449.46	3.14	38.32	105.79	0.8	
Reach-1	21 PF 1	111	2448.1	2449.22	1.36	84.45	219.35	0.38	
Reach-1	20 PF 1	111	2447.59	2448.74	2.27	43.07	211.46	0.96	
Reach-1	19 PF 1	111	2446.9	2447.83	1.83	63.41	160.47	0.49	
Reach-1	18 PF 1	111	2446.17	2447.24	2.53	40.28	149.29	0.9	
Reach-1	17 PF 1	111	2445.55	2446.85	1.63	69.91	169.29	0.44	
Reach-1	16 PF 1	111	2444.94	2445.97	3.46	31.69	87.56	1.01	
Reach-1	15 PF 1	111	2443.26	2444.64	2.12	26.44	36.91	0.61	

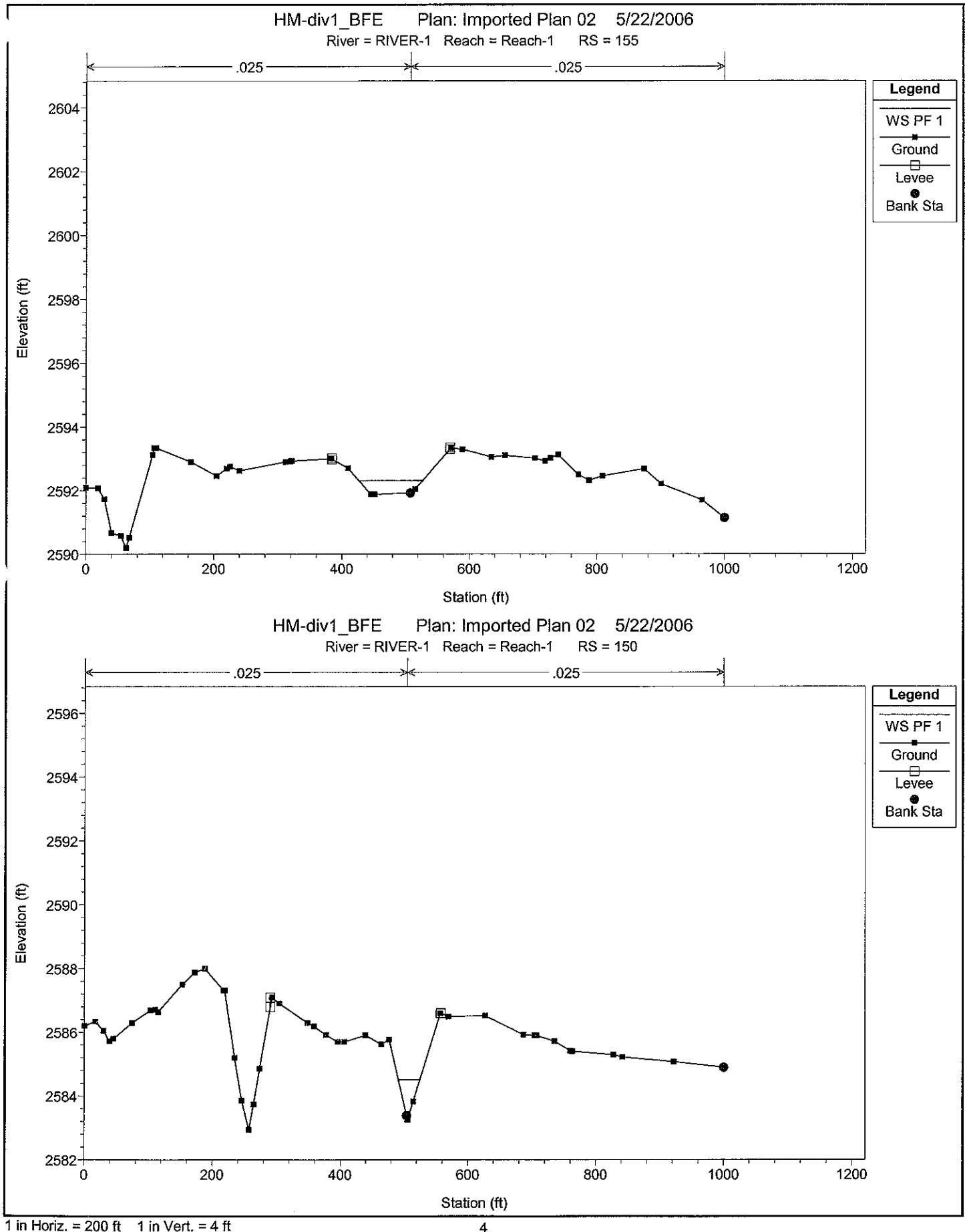
**Golden Valley Ranch
Technical Drainage Study**

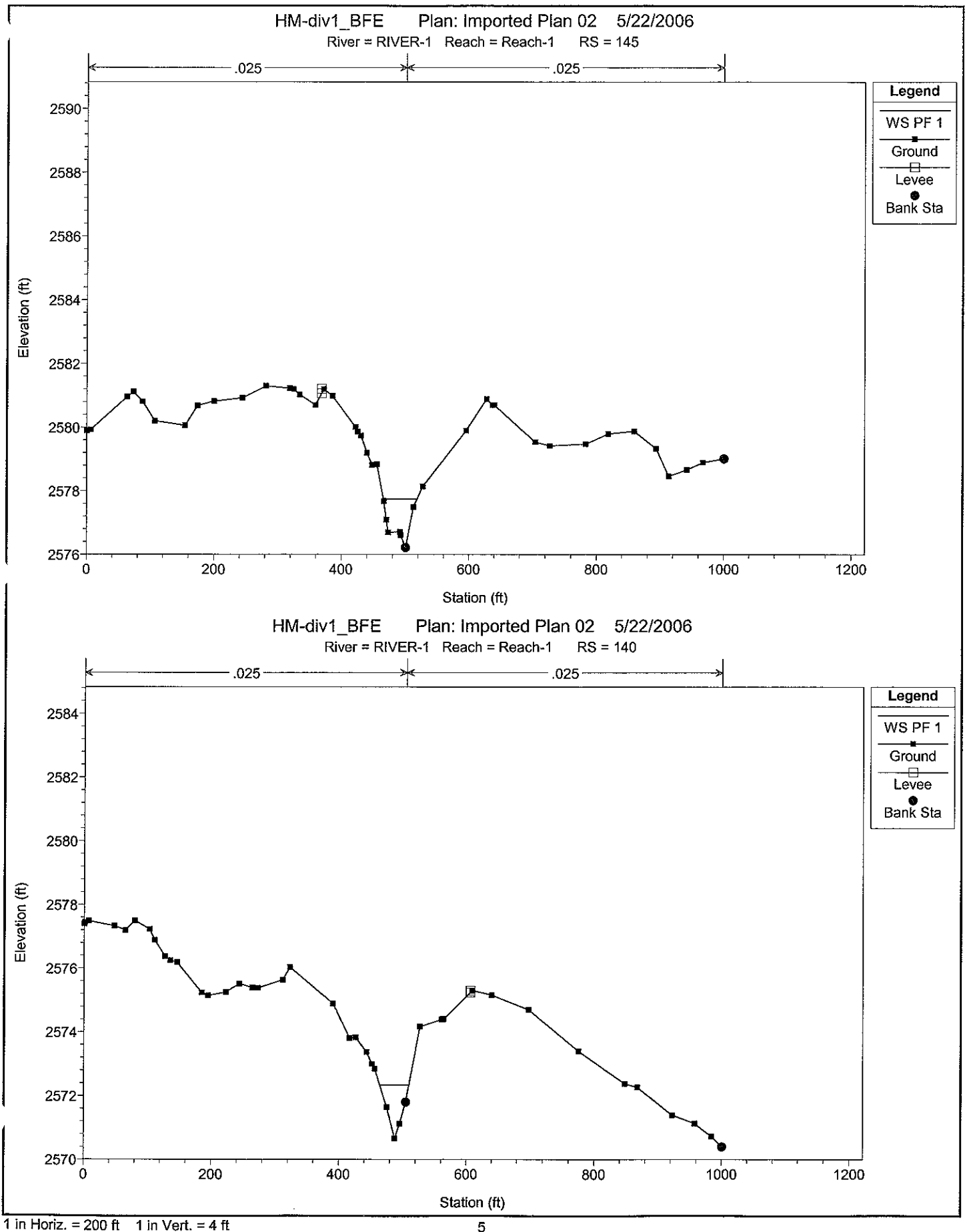
HEC-RAS Plan: Imported Pla River: RIVER-1 Reach: Reach-1 Profile: PF 1									
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Vel Chnl	Flow Area	Top Width	Froude # Chl
Reach-1	14	PF 1	111	2442.03	2443.4	6.17	16.24	20.61	1.34
Reach-1	13	PF 1	111	2442.1	2443.47	1.5	47.6	51.08	0.37
Reach-1	12	PF 1	111	2440.8	2442.44	3.55	23.71	34.27	0.91
Reach-1	11	PF 1	111	2441.9	2442.18	0.75	44.81	73.44	0.41
Reach-1	10	PF 1	111	2440.39	2441.53	1.98	43.03	61.11	0.43
Reach-1	9	PF 1	111	2439.92	2440.54	1.86	31.5	46.28	0.6
Reach-1	8	PF 1	111	2439.1	2439.76	3.7	25.4	41.61	0.94
Reach-1	7	PF 1	111	2437.5	2438.04	8.55	11.88	25.86	2.36
Reach-1	6	PF 1	111	2437.28	2438.14	2.32	28.54	37.76	0.65
Reach-1	5	PF 1	111	2436.62	2437.39	2.93	24.89	36.01	0.81
Reach-1	4	PF 1	111	2435.2	2436.06	6.43	17.83	26.84	1.35
Reach-1	3	PF 1	111	2434.2	2435.98	2.84	33.11	26.5	0.5
Reach-1	2	PF 1	111	2434.1	2435.51	2.47	35.6	26.19	0.44
Reach-1	1	PF 1	111	2433.5	2434.5	4.12	22.57	27.16	0.89

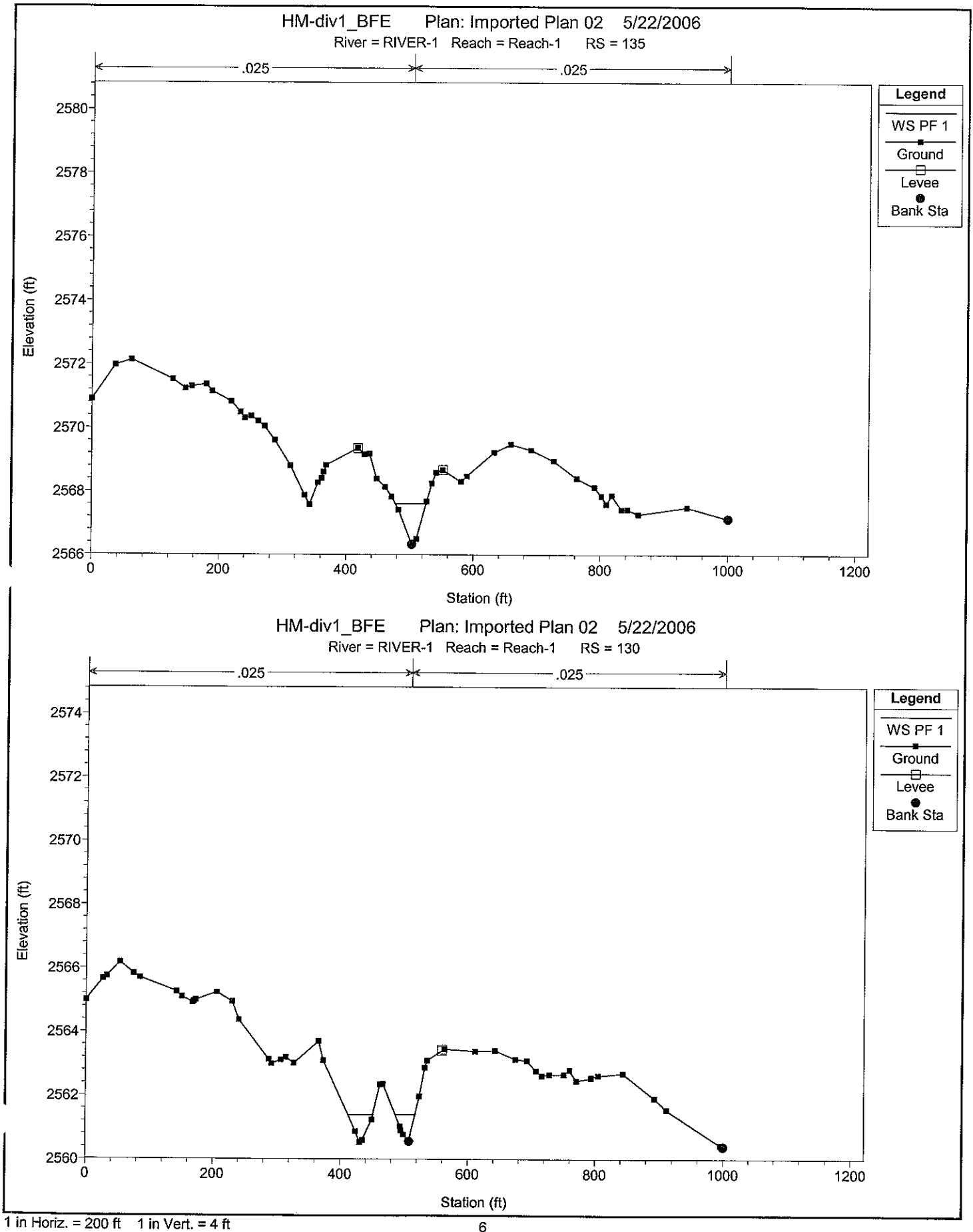


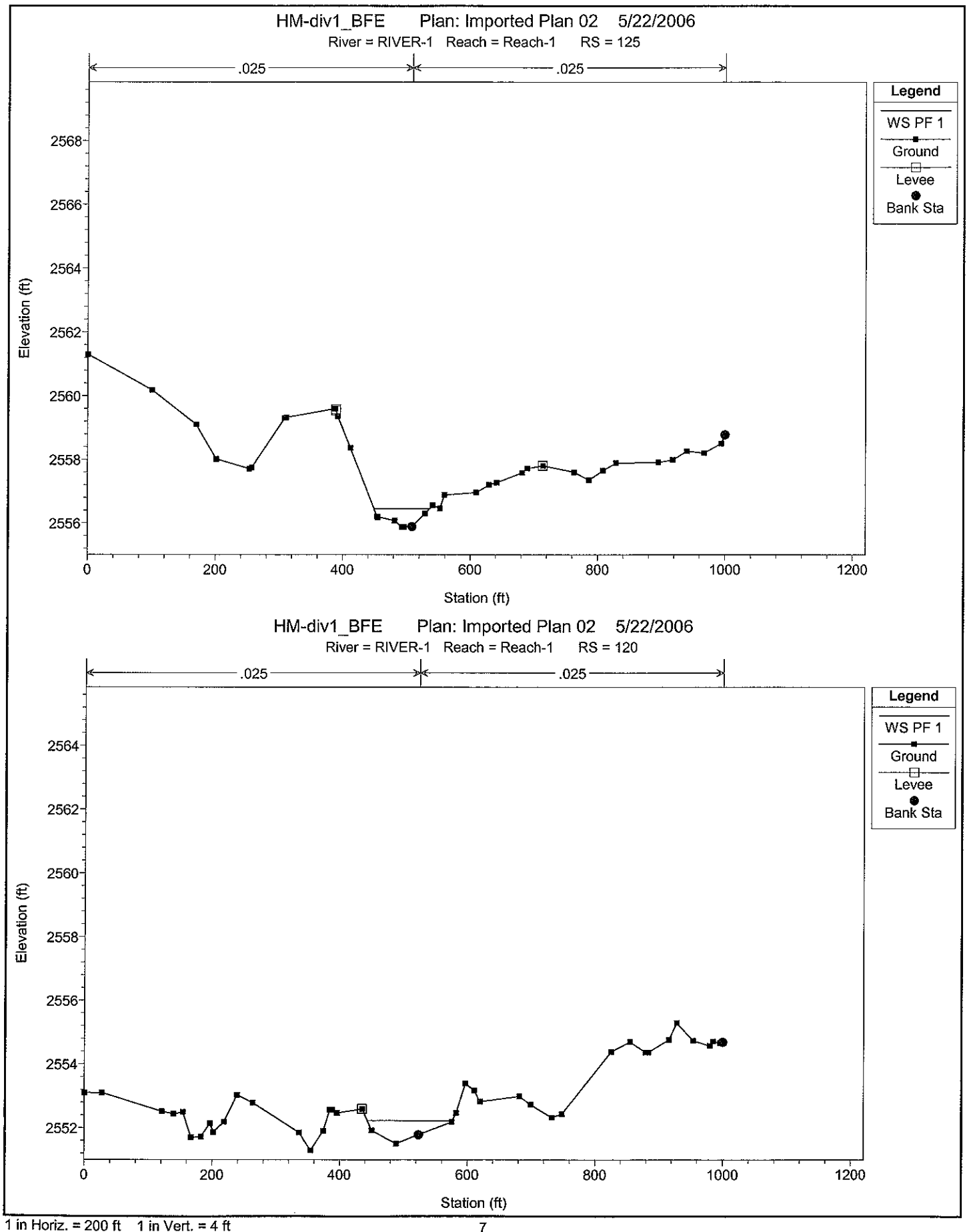


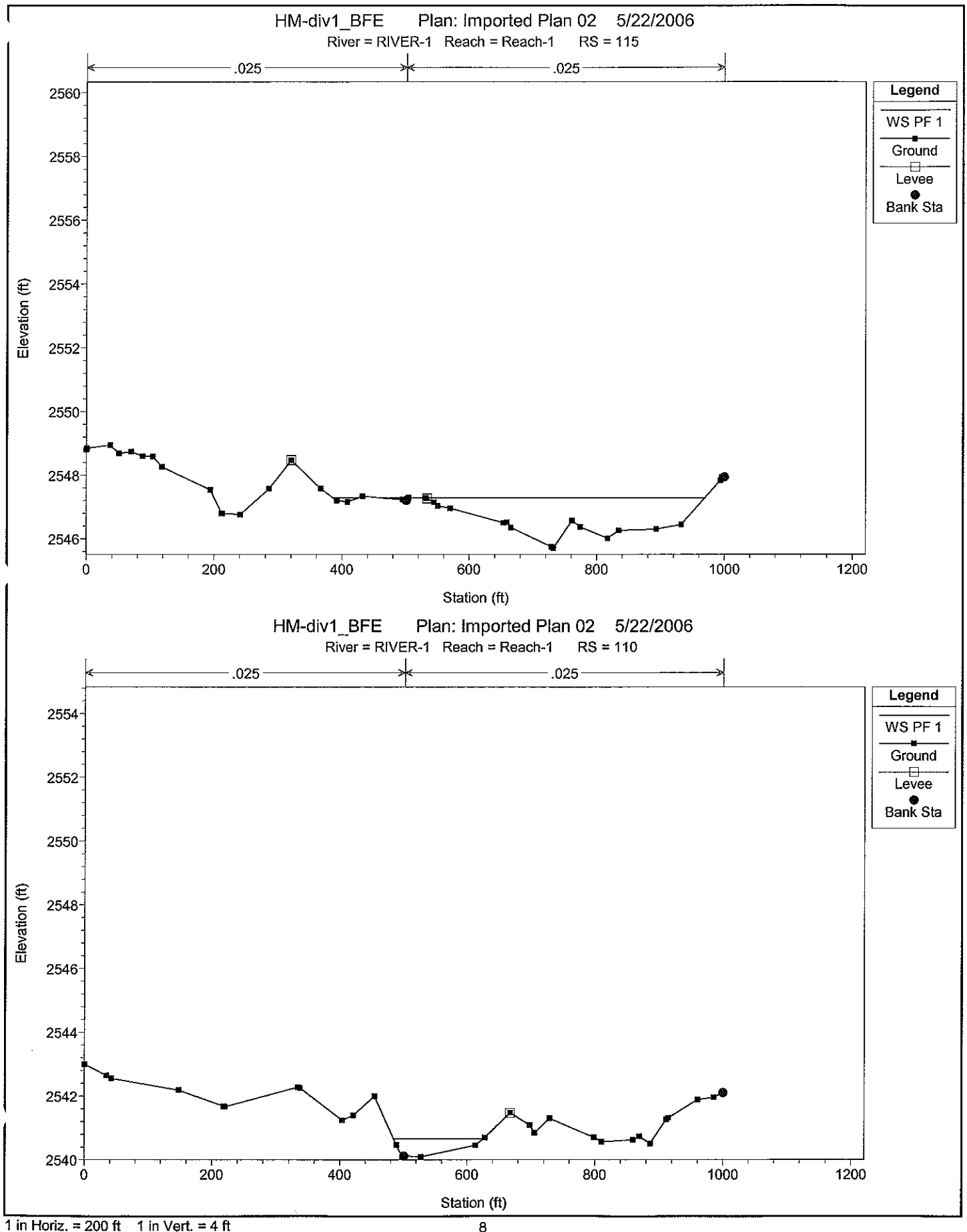


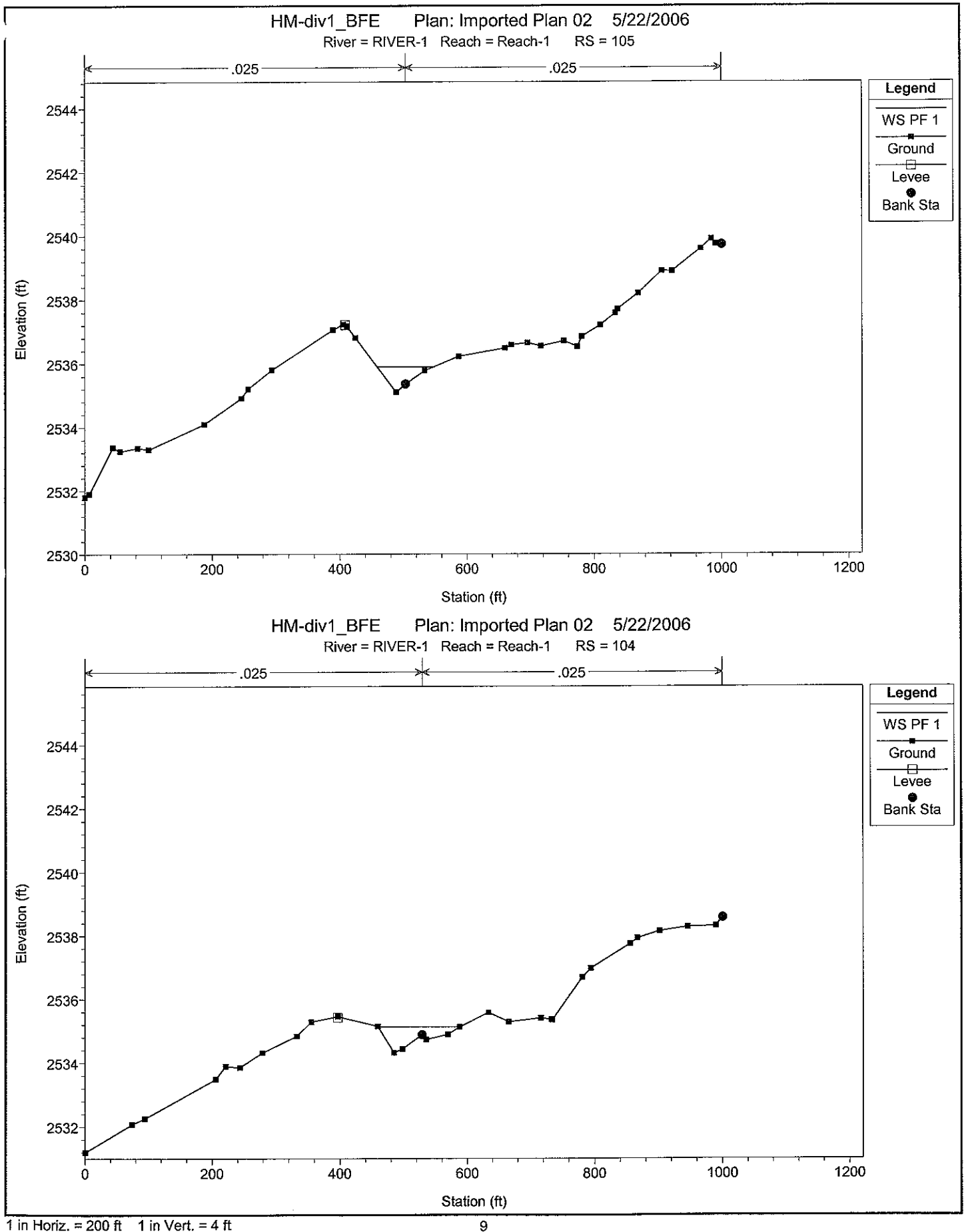


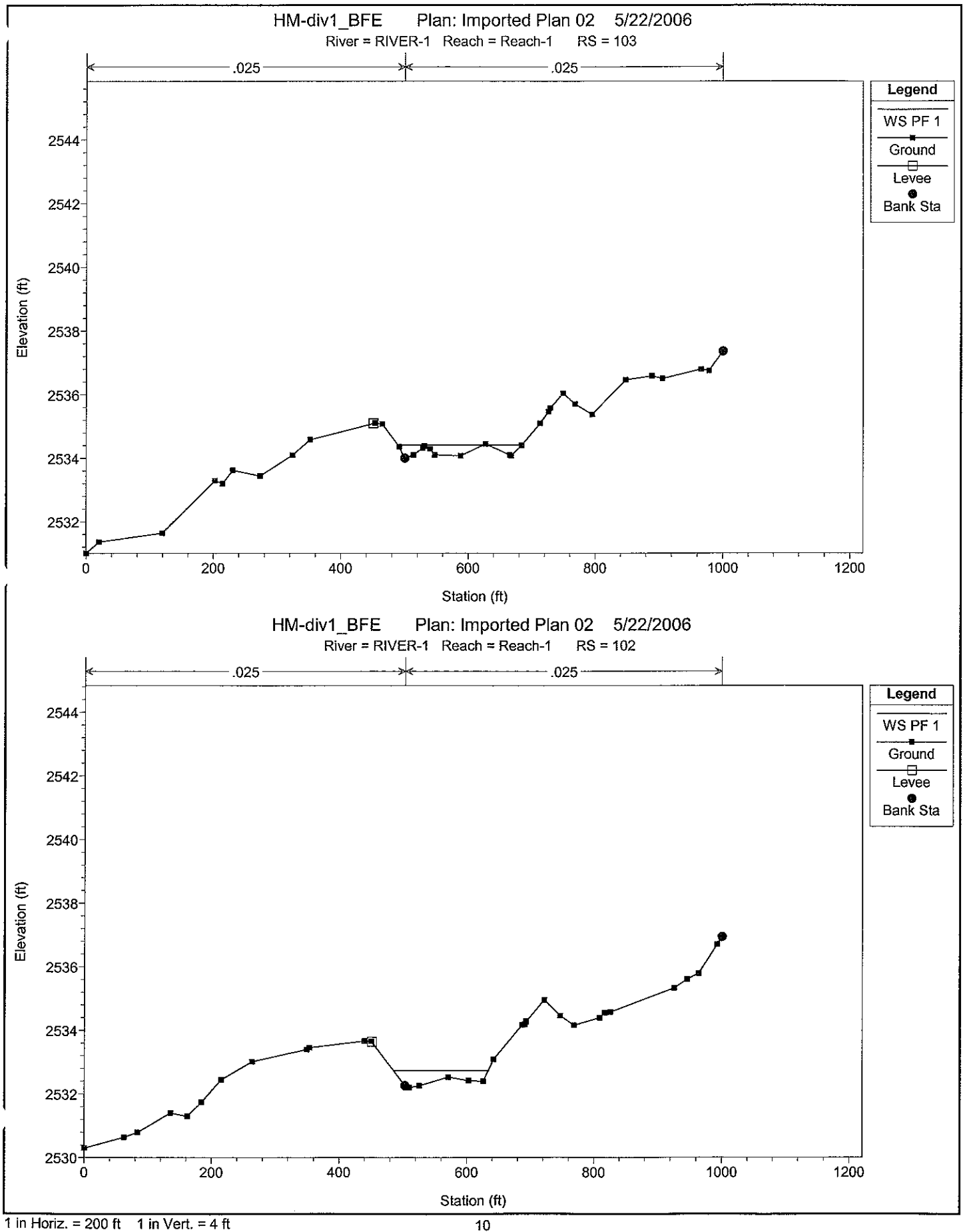


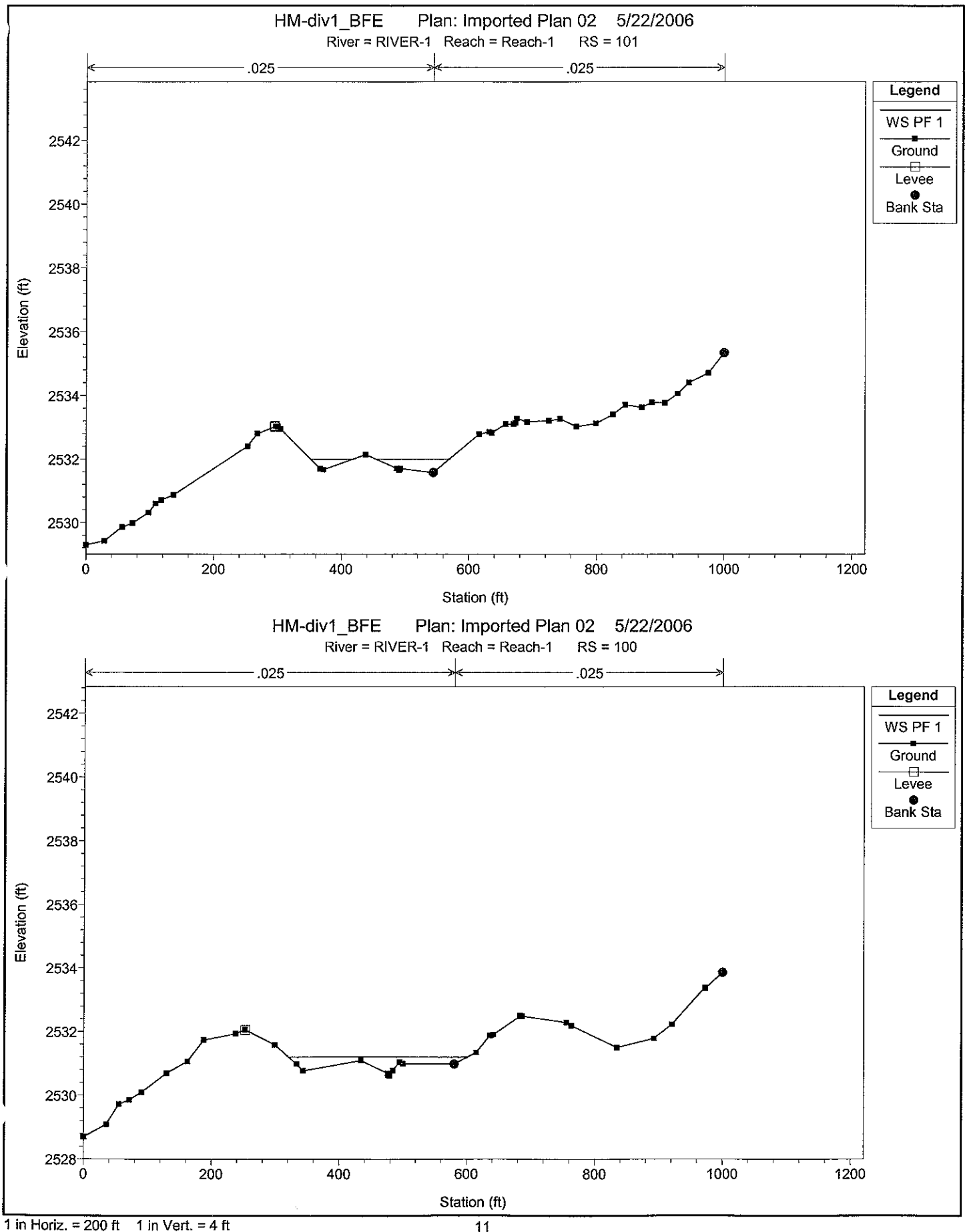


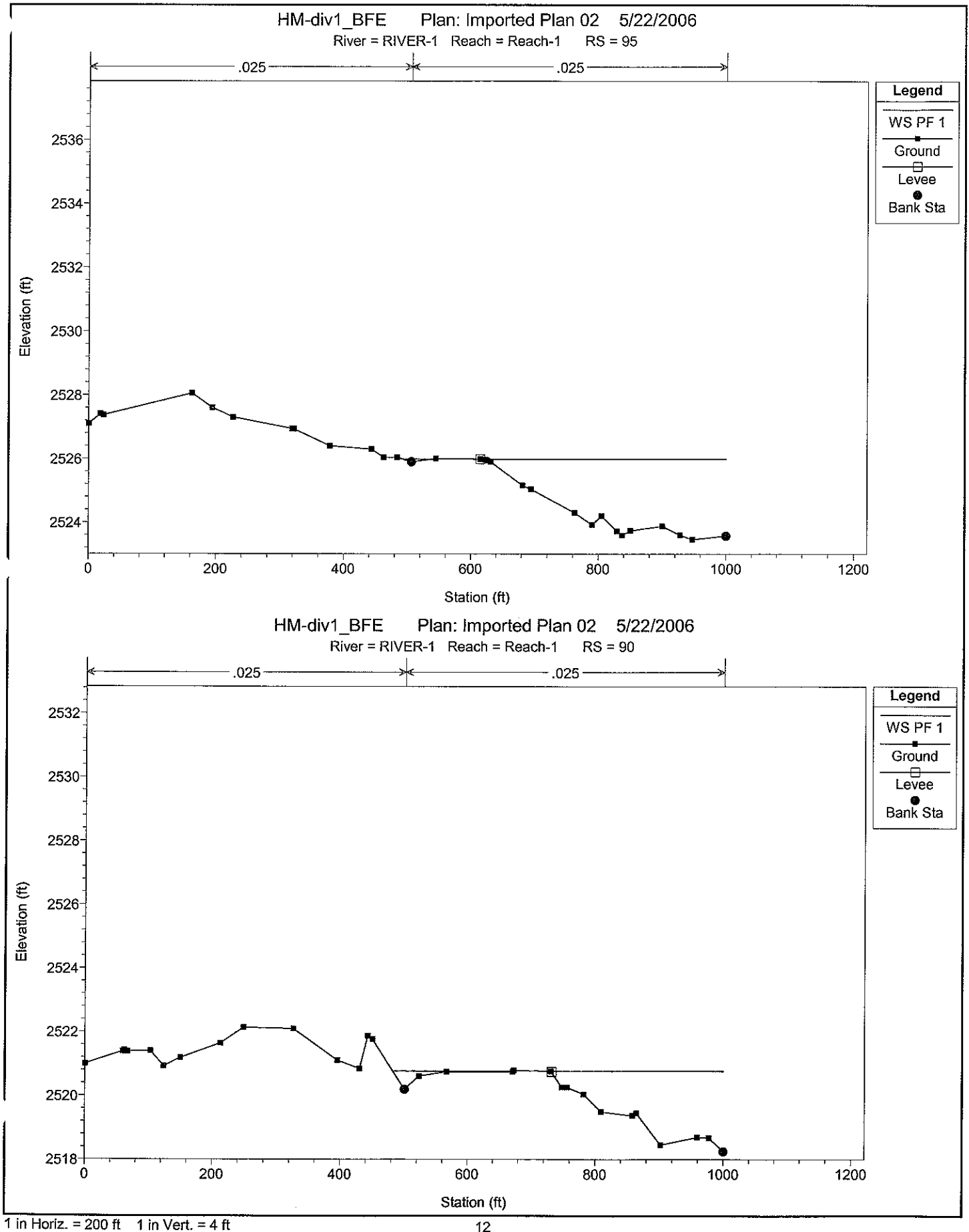


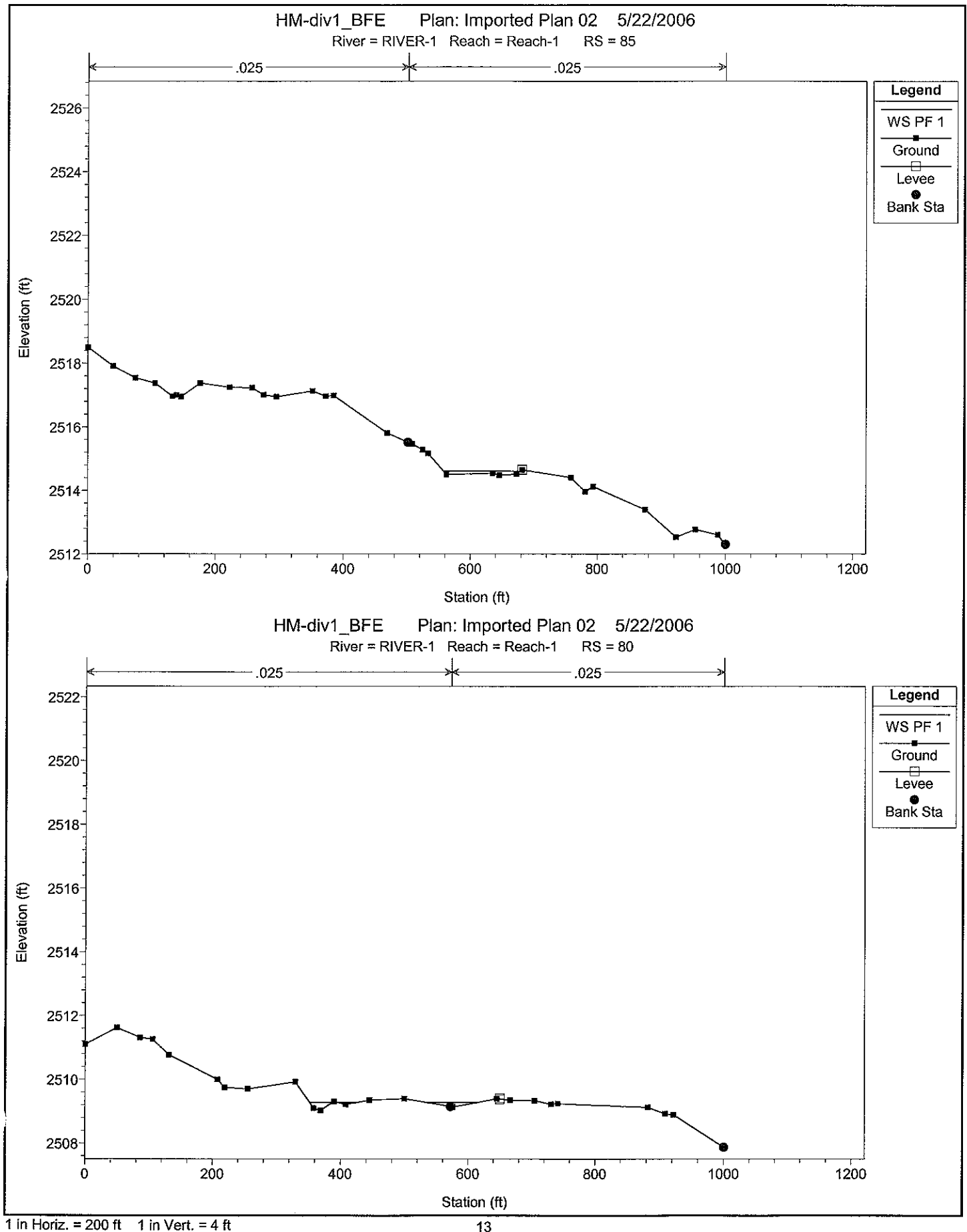


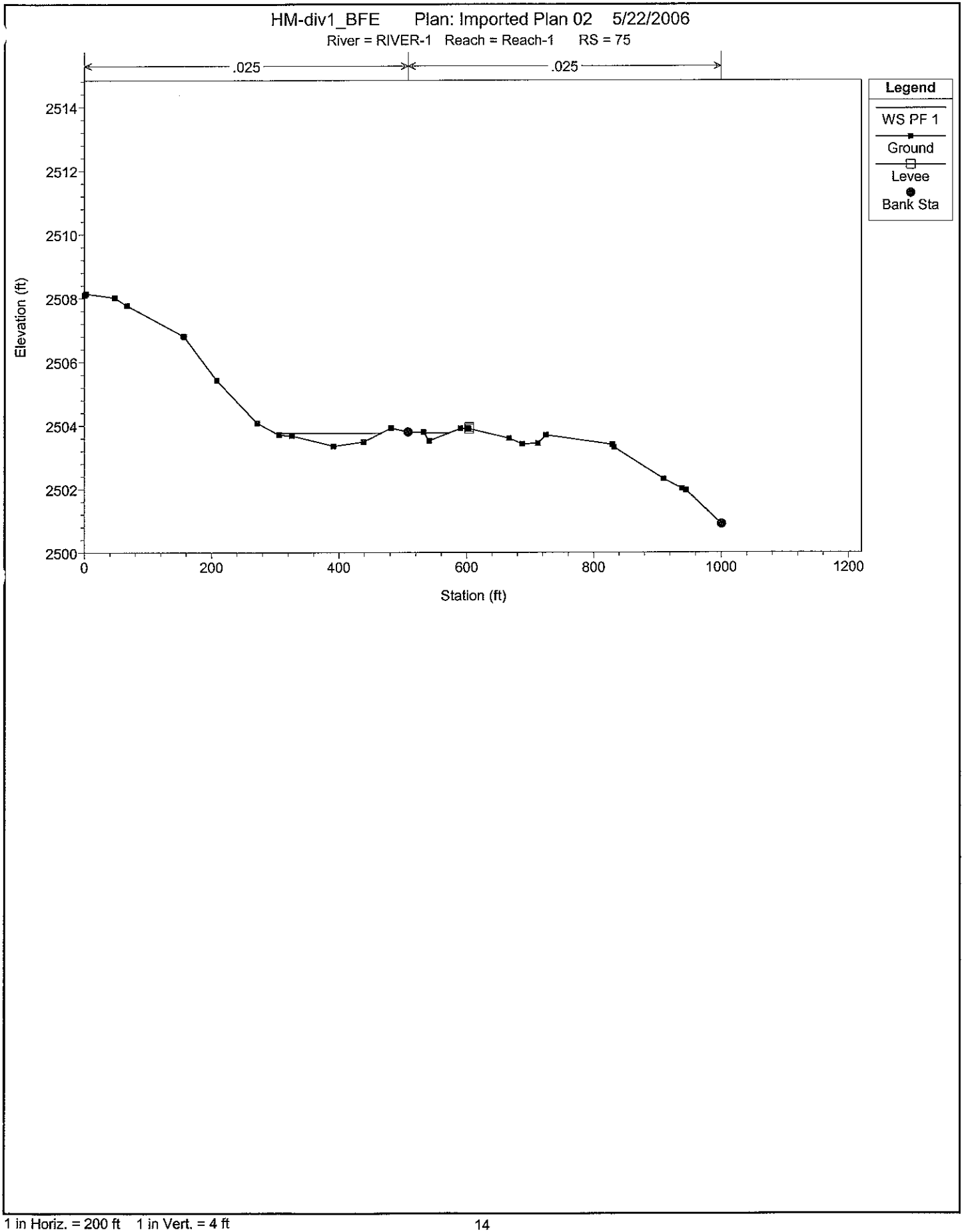












Cross Section Cross Section for Irregular Channel

Project Description	
Worksheet	Local Str 50'PL
Flow Element	Irregular Chan
Method	Manning's For
Solve For	Discharge
Section Data	
Mannings Coefficient	0.014
Channel Slope	0.005000 ft/ft
Water Surface Elev.	100.67 ft
Elevation Range	1.00 to 100.67
Discharge	68.88 cfs

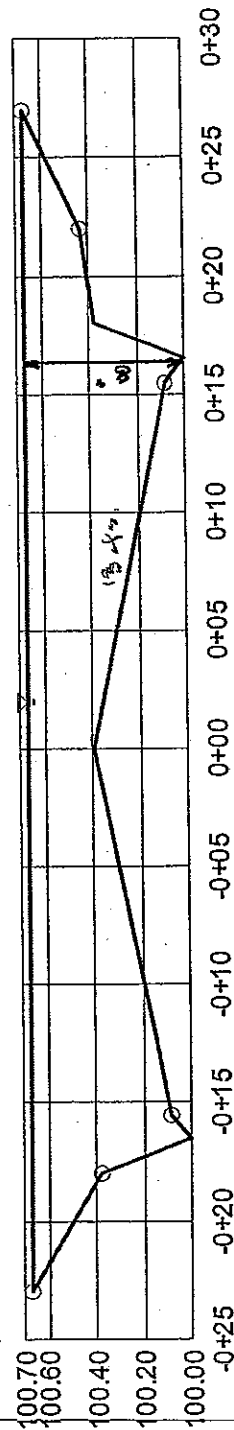


Table
Rating Table for Irregular Channel

Project Description	
Worksheet	Local Str 50'Pl
Flow Element	Irregular Chan
Method	Manning's Forr
Solve For	Discharge

Input Data
Water Surface Elev. 00.67 ft

Options
Current Roughness Method ved Lotter's Method
Open Channel Weighting ved Lotter's Method
Closed Channel Weighting Horton's Method

Attribute	Minimum	Maximum	Increment
Channel Slope (ft/ft)	0.005000	0.020000	0.000100

Channel Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft²)	Wetted Perimeter (ft)	Top Width (ft)
0.005000	68.88	3.73	18.5	50.12	50.00
0.005100	69.57	3.76	18.5	50.12	50.00
0.005200	70.25	3.80	18.5	50.12	50.00
0.005300	70.92	3.84	18.5	50.12	50.00
0.005400	71.59	3.87	18.5	50.12	50.00
0.005500	72.25	3.91	18.5	50.12	50.00
0.005600	72.90	3.94	18.5	50.12	50.00
0.005700	73.55	3.98	18.5	50.12	50.00
0.005800	74.19	4.01	18.5	50.12	50.00
0.005900	74.83	4.05	18.5	50.12	50.00
0.006000	75.46	4.08	18.5	50.12	50.00
0.006100	76.09	4.12	18.5	50.12	50.00
0.006200	76.71	4.15	18.5	50.12	50.00
0.006300	77.32	4.18	18.5	50.12	50.00
0.006400	77.93	4.22	18.5	50.12	50.00
0.006500	78.54	4.25	18.5	50.12	50.00
0.006600	79.14	4.28	18.5	50.12	50.00
0.006700	79.74	4.31	18.5	50.12	50.00
0.006800	80.33	4.35	18.5	50.12	50.00
0.006900	80.92	4.38	18.5	50.12	50.00
0.007000	81.51	4.41	18.5	50.12	50.00
0.007100	82.09	4.44	18.5	50.12	50.00
0.007200	82.66	4.47	18.5	50.12	50.00
0.007300	83.23	4.50	18.5	50.12	50.00
0.007400	83.80	4.53	18.5	50.12	50.00
0.007500	84.37	4.56	18.5	50.12	50.00
0.007600	84.93	4.60	18.5	50.12	50.00
0.007700	85.48	4.63	18.5	50.12	50.00
0.007800	86.04	4.66	18.5	50.12	50.00
0.007900	86.59	4.69	18.5	50.12	50.00
0.008000	87.13	4.71	18.5	50.12	50.00
0.008100	87.68	4.74	18.5	50.12	50.00
0.008200	88.22	4.77	18.5	50.12	50.00
0.008300	88.75	4.80	18.5	50.12	50.00

Table
Rating Table for Irregular Channel

Channel Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft²)	Wetted Perimeter (ft)	Top Width (ft)
0.008400	89.28	4.83	18.5	50.12	50.00
0.008500	89.81	4.86	18.5	50.12	50.00
0.008600	90.34	4.89	18.5	50.12	50.00
0.008700	90.87	4.92	18.5	50.12	50.00
0.008800	91.39	4.94	18.5	50.12	50.00
0.008900	91.90	4.97	18.5	50.12	50.00
0.009000	92.42	5.00	18.5	50.12	50.00
0.009100	92.93	5.03	18.5	50.12	50.00
0.009200	93.44	5.06	18.5	50.12	50.00
0.009300	93.95	5.08	18.5	50.12	50.00
0.009400	94.45	5.11	18.5	50.12	50.00
0.009500	94.95	5.14	18.5	50.12	50.00
0.009600	95.45	5.16	18.5	50.12	50.00
0.009700	95.95	5.19	18.5	50.12	50.00
0.009800	96.44	5.22	18.5	50.12	50.00
0.009900	96.93	5.24	18.5	50.12	50.00
0.010000	97.42	5.27	18.5	50.12	50.00
0.010100	97.90	5.30	18.5	50.12	50.00
0.010200	98.39	5.32	18.5	50.12	50.00
0.010300	98.87	5.35	18.5	50.12	50.00
0.010400	99.35	5.38	18.5	50.12	50.00
0.010500	99.82	5.40	18.5	50.12	50.00
0.010600	100.30	5.43	18.5	50.12	50.00
0.010700	100.77	5.45	18.5	50.12	50.00
0.010800	101.24	5.48	18.5	50.12	50.00
0.010900	101.71	5.50	18.5	50.12	50.00
0.011000	102.17	5.53	18.5	50.12	50.00
0.011100	102.64	5.55	18.5	50.12	50.00
0.011200	103.10	5.58	18.5	50.12	50.00
0.011300	103.56	5.60	18.5	50.12	50.00
0.011400	104.01	5.63	18.5	50.12	50.00
0.011500	104.47	5.65	18.5	50.12	50.00
0.011600	104.92	5.68	18.5	50.12	50.00
0.011700	105.37	5.70	18.5	50.12	50.00
0.011800	105.82	5.73	18.5	50.12	50.00
0.011900	106.27	5.75	18.5	50.12	50.00
0.012000	106.72	5.77	18.5	50.12	50.00
0.012100	107.16	5.80	18.5	50.12	50.00
0.012200	107.60	5.82	18.5	50.12	50.00
0.012300	108.04	5.85	18.5	50.12	50.00
0.012400	108.48	5.87	18.5	50.12	50.00
0.012500	108.92	5.89	18.5	50.12	50.00
0.012600	109.35	5.92	18.5	50.12	50.00
0.012700	109.78	5.94	18.5	50.12	50.00
0.012800	110.22	5.96	18.5	50.12	50.00
0.012900	110.65	5.99	18.5	50.12	50.00
0.013000	111.07	6.01	18.5	50.12	50.00
0.013100	111.50	6.03	18.5	50.12	50.00
0.013200	111.92	6.06	18.5	50.12	50.00
0.013300	112.35	6.08	18.5	50.12	50.00
0.013400	112.77	6.10	18.5	50.12	50.00
0.013500	113.19	6.12	18.5	50.12	50.00
0.013600	113.61	6.15	18.5	50.12	50.00